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# *Lectures on Architecture*

Robert Morris

~~752.~~

~~53. m. 9~~

✓ Arch. Tays. 37

*Ex Legato*



*Roberti Taylor, Militis,  
Fundatoris.*









*To face the title.*



*W.H. Jones sculp.*

# LECTURES ON ARCHITECTURE.

Consisting of

## RULES

Founded upon

HARMONICK and ARITHMETICAL  
Proportions *in* Building.

DESIGN'D

As an Agreeable *Entertainment* for  
GENTLEMEN:

AND

More *Particularly Useful* to all who  
make ARCHITECTURE, or the  
*Polite Arts*, their Study.

---

Read to a SOCIETY Establish'd for the Improve-  
ment of ARTS and SCIENCES, and EXPLAIN'D  
by Examples on Copper Plates ; with the Propor-  
tions apply'd to Practice.

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By ROBERT MORRIS.

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L O N D O N :

Printed for J. BRINDLEY, at the *King's-Arms* in  
*New-Bond-street*. M.DCC.XXXIV.







To the HONOURABLE  
*Sir Michael Newton, Bart.*  
*Knight of the BATH.*

*Honoured Sir,*



Wherever HARMONY re-  
sides, either in *Numbers,*  
or *Nature,* it immedi-  
ately strikes the *Imagination,* by  
some *Attractive* or *Sympathizing*  
Property.

a

THERE-

## DEDICATION.

THEREFORE as these LECTURES, particularly describe the *Arithmetical* and *Harmoniack Proportions* applied to BUILDING, I am naturally led to address them to your H O N O U R, in whom HARMONY is so apparently center'd.

YOUR *Just Taste* of the POLITE ARTS, distinguishes in You a *Noble and Peculiar Genius*, and as ALL Ages of the World, afford many Instances of the kind *Reception* and *Patronage* of ARTS and SCIENCES, by the most Eminent in *Wisdom* and *Power*; So Your H O N O U R in THIS, more  
re-

## DEDICATION

remarkably appears a True JUDGE,  
as well as PROTECTOR, of that  
*Pleasing and Extensive ART, ARCHI-*  
TECTURE.

THE ANALOGY of the *An-*  
*cients*, in *Building*, is a SECRET,  
which hath been preserved from  
the *Early AGES* of Time, even  
from the Infant State of ARCHI-  
TECTURE, and as I have at-  
tempted to Explain that ANA-  
LOGY in these LECTURES,  
they want nothing more, than  
Your HONOUR's Name prefix'd  
to them, to give them *Sanction*,  
and render them USEFUL to  
the *World*, in the *Practice*, as  
well as *Theory* of BUILDING;  
which

## DEDICATION.

which will be the Means to *Im-*  
*prove* that *Noble* and *Useful* Sci-  
ence, and add to Favours re-  
ceived by

*Your* HONOUR'S

*Most* OBEEDIENT,

AND

*Most* HUMBLE *Servant,*

ROBERT MORRIS.



# P R E F A C E.



*I* is about three Years and half since I propos'd the establishing a SOCIETY for the Improvement of Knowledge in ARTS and SCIENCES, which being consented to by those Friends to whom I communicated my Thoughts, we were soon settled into the Form of a SOCIETY: ARCHITECTURE was the favourite Branch of my Study, and as a Basis to my Design, I read the following LECTURES, as you will find them, dated.

A 1.

In



## P R E F A C E.

*In these Lectures are contain'd, the Use and Necessity of SOCIETIES, the Advantage of LEARNING, the Antiquity of ARCHITECTURE, of the Orders in General, their Application to USE, a proper Choice for SITUATION; Arithmetick and Harmonick Proportions applied to Practice, and exemplified in Copper Plates, with necessary Remarks and Observations, to explain the Subject treated on.*

*It is not difficult to discern the same Tract of Thought run through the whole Performance, and the favourite Principle of the Harmonick Proportions still preserv'd and adher'd to in the Performance of each Scheme laid down. It is very easy to discover the Works of a PLAGIARY, his Stile is unconstant and variable, his Subject inconsistent in  
its*

## P R E F A C E.

*its Parts, diverging into improper Channels, and losing Sight of the Mark aim'd at at first setting out : This is the Case, where the Person has, for want of Judgment, chose a Theme out of the Ken of his Understanding.*

*I have not Vanity enough to say the following Lectures consist of nothing but what is ENTIRELY NEW : But there are such Parts in it, and, indeed, the CHIEFEST, that flow'd wholly from my own private Sentiments.*

*Since my delivering these Lectures to the Printer, I have read the Critical Review of the Publick Buildings, &c. His Observations, it must be acknowledg'd, are just in some Places, in others more ludicrous, and sometimes so remote from real Criticism, that a florid Expression,*

## P R E F A C E.

*sion, a rhetorical Sentence, or a partial Censure, must atone for the Deficiency of his Judgment in the Principles of Architecture.*

*As, I presume, the Design or Attempt of his Review of the Publick Buildings, is to point out the Beauties, or to inform the World of their Blemishes, that they might embrace the one, and endeavour to avoid the other, in the Execution of future Buildings, it would have been necessary to assign Reasons for his Dis-  
taste, and to shew where the Errors lay. But it is only his own Opinion, which he would force upon his Reader : And as I had made an Observation upon Grosvenor-Square before he attempted it, I propose to shew that Author all the real Defects of the triple House on the North Side, which may be a Specimen*

## P R E F A C E.

men for him to follow in future Criticisms.

*If the Attick Windows had been square, all rang'd upon the same Level, and remov'd so far lower from the under Part of the Great-Entablature, as to make the Margent, or Distance, equal to those of one Window from another, that a kind of Fret might have been preserv'd through the whole Range of the Design, and if the Dress of the principal Windows of the Center House, which are of Pillasters of the Composite Order, were not rusticated or block'd, and the Entablatures without Key-Stones : I say, except those little Impediments to Harmony, there is no Defect in the whole Design : It has a Grandeur and Proportion in the Composure, the Parts are Majestick and of an ample Relievo, and the Taste is as elegant as the most agreeable*

## P R E F A C E.

*agreeable Designs of those who boast of being exact Copiers of Palladio or Inigo Jones.*

*As to Situation, it was, perhaps, impossible to place it in the Center of that Side, the Ground not being his Property; and the same Architect did compose a regular Range for that whole Side, in which he has shewn a Nobleness of Invention, and the Spirit and Keeping of the Design is not unworthy of the greatest British Architect; but the unpolite Taste of several Proprietors of that Ground prevented so beautiful a Performance from being the Ornament of that Side of the Square.*

*It must be observ'd, that a regular and harmonious Design, plac'd among other Buildings, or independent of any, will consequently be still pleasing;*



## P R E F A C E.

*pleasing ; it will be in itself Elegant, and, at a proper Distance to view it, will always affect the judicious Eye. The intended Satire, of saying the Designer had a View of taking in some young Heir, is false Criticism ; it is rather a Panegyrick upon his Judgment ; it shews a Taste in the Architect capable of pleasing, for it is only Proportion and Beauty that can affect the Eye of the Judicious or the Ignorant, so as to please ; it must therefore be a Politeness of Fancy in the Architect, to compose and blend together the Beauties of Dress and Decoration, and make a Design capable to give Satisfaction to the Beholder.*

*What I have here said, may be a Defence of the East Side, where he cannot deny a Regularity and Ele-*  
a *gance*

## P R E F A C E.

gance of Taste, but yet his Talent of Satire will be predominant. Had the Architect expanded the Pediment of that House in the Center of the Line to a Proportion of the whole Range, I should be glad to know why, and what Part of the Whole it must have necessarily assign'd to it? The Middle House breaks forwards, is of another Species than those adjoining, then consequently is independant of any Proportions belonging to them: It is a Design of itself, and not suppos'd to represent the Range as one House, only to preserve a Regularity in the Disposition of the several Buildings which compose the Line.

But he may farther observe, that the Windows of the two extream Houses and the Center, are not of the same Magnitude or Level with  
the

## P R E F A C E.

*the rest, so that the Floors cannot be suppos'd to range on a horizontal Line with each other, and consequently the Intent of the Design was to suppose each House separate and independant of another; and as the Dresses and Ornaments vary, and have not an Affinity, they cannot be condemnable, the Design being only to shew how far the shifting and changing of different Modus's and Proportions, when regularly dispos'd, will affect the Eye. In short, to dislike every thing we see, seems to savour of Ill-nature and Self-opinion, which are Imperfections in our Conduct; and such little Blemishes are as unpardonable, as an over Fondness of Novelty, or an Affectation to Praise.*

## P R E F A C E.

*There is one Thing, however, which deserves our Notice and Applause, and that is, that the Author of the Critical Review has the Happiness of first attempting to refine the Taste of our Modern Architects, by shewing them Examples of Publick Designs which have been esteem'd the most noble and regular Productions of the present Age, as well as preceding ones— And if these LECTURES should, in any measure, contribute to the Advancement of improving the Genius of young Students in Architecture, I may at least claim the second Place, since I have laid down RULES whereby we may distinguish what is Proportion and true Harmony, and have apply'd those RULES to Practice by sundry Examples, which may be said to be*  
the

## P R E F A C E.

*the first Attempt in which the Beau Ideal has been publickly explain'd.*

*Since I have mention'd the Beau Ideal, which was wrote by Hermanfon Ten Kate in French, and translated by M. Le Blon, Anno 1732, I must acknowlege the first Hint I receiv'd of the Harmonick Proportions, came from that Ingenious Gentleman. In the Preface to the Beau Ideal, he mentions the Grecian Analogy, and to whom the Secret was communicated; but it is to be wish'd, since Ten Kate's Relations have not publish'd it, that M. Le Blon would oblige the World with so valuable a Piece, by making such useful Remarks which he can so well apply to Architecture as well as Painting; in which the whole Mystery of Proportion would be unravelled, and a Secret preserv'd*  
so



## P R E F A C E.

*so many Ages, might by him be made publick, for the universal Good of Mankind, and the perfecting of Arts and Sciences, so far as to have every Branch of them perform'd by unerring Rules; a SECRET which was by the Antients found out, and but by a few Moderns known and practis'd.*

*If the Reader can receive Benefit or Pleasure in the Perusal of these Lectures, I have satisfy'd myself in what I at first propos'd in publishing them, which is a Desire to be Instrumental to the Improvement of Arts and Sciences, and so employing my Time, that no Part of it may be said to be useless.*

Man is naturally design'd for a Social Being, and made for noble or useful Purposes in the Creation;  
and

## P R E F A C E.

and if it is not in his Power to improve others in Knowledge, it is an incumbent Duty in him to endeavour to refine his own Understanding, whereby he may be said to answer the End of his Existence, in some measure, and in which Sense I wish to be understood. *Now I subscribe myself,*

*Your humble Servant,*

R. MORRIS.



THE Reader is desir'd to correct the following *Errata*.

The Table before the 6th *Lecture* should have been plac'd at the End of it; and for the Proportion 6, 5 and 4, *Page* 79, place the following Proportion mark'd F. *Plate* 2d, P. 75.

| Rooms.  |          |         | Chimnies. |                  |                 |                   |
|---------|----------|---------|-----------|------------------|-----------------|-------------------|
| Length. | Breadth. | Height. | Breadth.  | Height.          | Depth.          | Square of Funnel. |
| 30      | 20       | 10      | 3         | 10 $\frac{1}{2}$ | 3               | 2 $\frac{1}{2}$   |
| 36      | 24       | 12      | 4         | 3                | 5 $\frac{1}{2}$ | 1                 |
| 42      | 28       | 14      | 4         | 7 $\frac{1}{2}$  | 3               | 9                 |
| Etc.    |          |         |           |                  |                 |                   |

Proportion 3. 2. 1

7




LECTURES  
ON  
ARCHITECTURE.

# LECTURE I.

**GENTLEMEN,**



T is with Pleasure I see so many of you met here with an unanimous Consent to propagate Knowledge, without sordid Views of Gain, or any byas'd Interest; and this mutual communicating of such useful Branches of Learning to each other, will render  
B this

this a Society which even ENVY itself can no way dissolve: And as you have done *me* the *Honour* to chuse me your *President*, I shall endeavour to discharge that Trust with the utmost Afiduity and Care; communicating to you such Parts of ARCHITECTURE which have not been fully explain'd, or transmitted to us, by those who have treated on that Subject. I shall be as concise in my Language as the Subject will permit, endeavouring to say nothing but what I think will be Necessary; still aiming at the Design for which this Society is propos'd to be instituted.

As we are now forming ourselves into a kind of little Republick, for the mutual Assistance of each other, I shall in this Lecture shew you the absolute Necessity and Advantages of *Societies* in general, as they relate to the publick or private Welfare of the Individuals; both in respect to the Preservation of Rights and Properties, and Improvement of the Intellects of the Mind.

MAN is a Being, by his very Make and Constitution, incapable of subsisting alone, more things being wanting to support

## ARCHITECTURE: 3

support him, than it is possible he can provide for himself. Food and Raiment are absolutely requisite, and if he alone were to provide them for himself in time of Health or Youth, and live upon such Fruits which the Earth spontaneously produceth, or that Roots and Herbs were capable of continuing Life in that Health and Vigour of Age; yet which way must he be provided for when he comes to the Verge of Old Age? Or suppose Sickness should seize him, and he could not be able to stir from his Cave or Retirement, how would Nature languish, and what Anxieties would he have in that melancholy Condition?

BUT suppose Nature prompted him to seek only the Help of the other Sex, yet by that Means the Wants would undoubtedly encrease: Nature would require something more than Raiment and Food; the Instinct of propagating the Species would commence, and then more Relief, and the greater necessity of *Society* will be requir'd.

IF it were possible to overcome these Inconveniencies, and that the little Family

mily was grown up to Maturity, capable of providing for themselves what was necessary to sustain Life, by cultivating the Ground near them, for the produce of Corn, or Plants and Vegetables, and Food for Cattle, which are necessary for conveying the Fruits of the Earth, ploughing, &c. I say, suppose these Difficulties surmounted, yet in time they would form themselves naturally into a kind of *Society*: It would be almost impossible, but some amongst them would be more lazy or covetous than the rest; and the more industrious part of the Family would be for fencing and securing his Property, which by his Labour he had acquir'd: Then Traffick would be necessary, in exchanging such Things which they abounded in most, for such they stood in more need of.

BESIDES, this Gardening, this Agriculture, &c. must suppose Trades to supply Tools necessary for the Performance of the several Parts; these could not be done without Arts and Sciences, or at least as much as is requisite to instruct them in the Nature and Qualities of Metals, Wood, Stones, &c. to make and provide

## ARCHITECTURE. 5

provide for the Purposes requir'd ; and in this Men would find so much of their Time spent, that little would remain to the manuring of those Plots which produc'd their Food ; and even the Care of that would take off much of the Improvement which it is possible he might make in the Progress of the *Art* which he mostly inclin'd to follow.

IT may be farther observ'd, that as the Increase of the Families would occasion the little Plots they possess'd to be enlarg'd or multiply'd, by degrees they would find themselves under many Difficulties ; and there would soon be a clashing of Interests, in which Disputes and Quarrels would naturally follow : Many things would likewise occasion Envy, according to the different Interests of the Individuals ; and likewise some Men are naturally troublesome, more rapacious, and ungovernable than others ; some theivish, vicious, &c. who would continually be encroaching upon the Properties of his Neighbour ; and the Ambition and Covetousness of others might prompt them, if they had any Advantage, to make themselves greater or stronger, by taking away the Properties of

of



## 6 LECTURES *on*

of others, and by repeated Instances of their Tyranny, Men would find themselves under a Necessity of associating themselves, for the better guarding and securing their several Plots, &c. which by their Industry, or Patrimony, they might have acquir'd.

IN Time, Necessity would induce Families to friendly Engagements, for Comfort and Defence; and as the Reason of it increas'd by Ties of Friendship, or Blood, or those stronger Motives of Self-preservation, People would mix and unite; the Weak and Innocent would be glad to place themselves under the Protection of the more Able, and naturally giving Way for them to have the Pre-eminence, the several Sorts would settle in time in their proper Places, according to their several Capacities, with respect to the Common Concern; from all which some Form of Society must spring; Mankind could not otherwise subsist.

A SOCIETY thus form'd, for the common Good and Welfare of the People associated, must naturally frame some Rules, or Laws, by which they agree to  
be

## ARCHITECTURE. 7

be govern'd ; for in such an irregular Multitude, where the Caprice, or Judgment, or Humour of every private Person is to be observ'd, there would be a Jargon of Inconsistencies, and each Opinion would interfere with one another, and from such an indigested Chaos of dissenting Parts, must spring Confusion, and would soon damnify and destroy each other, springing from the several Turns of their Minds, from their Education, way of Living, and other Circumstances. We must suppose those Laws to be under a Subordination of Powers, to execute them for the Interest of the Individuals : Some Government must arise in the forming those Laws, and in all (THOSE) whose Fortune or Knowledge was predominant, would naturally subside.

MEN being thus led from their Caves and Retirements by Necessity to associate together, for the better accommodating themselves with the Conveniences of Life, when the Wants of increasing Families set them to the Exercise of their Reasonable Faculties ; for the Attainment of Knowledge and Support, their Ideas must be consequently various,

## 8. LECTURES on

ous, and lead them to various ways of Thinking, according to the several Passions, Inclinations, or Opportunities which Nature or Fortune afforded them; some applied to Tillage, some to Handicraft Employments, others to Mathematical, such as Buildings, &c. as the several Wants and Necessities of the Community requir'd.

As none can deny the Necessity and Advantage of Society, so it must be equally allow'd, such Societies could not well subsist, *WITHOUT* those *useful* and *couvenient Buildings* which keep in just Oeconomy and Order, every Man's peculiar Property. Besides, Cold and Heat in their Extrems, could not well be endur'd under the bare Canopy of Heaven; nor could such Societies be capable to secure themselves from the Insults of Enemies, the Injuries of the extream Seasons, the Pillage of Theives and Robbers, which would frequently attack them, if they were not secur'd by a Defence, wherein they must manifestly break through all Restrictions of Laws, in attempting to deprive them of their Rights or Repose.

GENTLEMEN,

GENTLEMEN, SOCIETIES thus *modell'd* and *regulated*, under the Protection of useful Laws, even those Laws themselves, or Form of Government, absolutely require useful and convenient Buildings to be Erected; for as those Laws are made by the Direction and Management of Persons superior in *Learning*, *Wisdom*, or *Quality*, to the Bulk of the Society, they must have more ample Possessions to distinguish them from the inferior Part of the Species, to create an awful Respect in them; and in such Buildings, convenient Apartments will be wanting, to consult the Benefit and Advantages of the Society, for the Reception of Attendants, &c. And as in all such Cases, great will be the Wants, so much Judgment will be requir'd, to form a just Disposition of Materials, to make an useful and commodious Building.

IF the End of Societies thus consists, or rather could not be kept together, in just Oeconomy and Order; unless secur'd and provided for in Building; if we could not be certain of our Rights, but continually attack'd by the Insults of

C

Enemies,

Enemies, the Injuries of Weather, the Storms and Tempests of extream Seasons, the Rapine and Pillage of Thieves, &c. so it is absolutely convenient that such Societies should, as near as possible, assemble together for the Advantage of Commerce and Conversation.— Man would be but a dull and melancholy Being, if alone; his Wants would daily increase, which are now reliev'd, according to the several ways in which his Necessities consist, and correspondent to his several Desires; he is now furnish'd in *Cities* and *Towns*, which could not be accommodated, were Mankind to separate from Society, and whose Habitations were situated as every one's Fancy led.

I COULD have made use of many reasonable Arguments, to prove the Necessity of Buildings in general, and the Knowledge which every *Individual* of a Society ought to have of this Science; for his own *private Use* and *Interests*, for the better securing their Properties to themselves and Posterity; but as a Digression of this kind would lead me from the Design I propos'd by this Lecture, I shall only say, that a Knowledge  
of

## ARCHITECTURE. 11

of Building may, in some measure, be useful to Mankind through all the Oeconomy of Life.

THE Shell, the Cortex, of the Man, thus provided for, let me point out the Advantage of Society in the Improvement of his Intellects, the Mind; in which the Benefit is more conspicuous, more extensive, and necessary: For by an Improvement of the Intellectual Faculties, Laws were first distributed, *Arts* and *Sciences* were improv'd, and all those extended Progresses made in Astronomy, Geography, Navigation, Painting, Musick, *Architecture*, &c. are owing to the Association of Men of the same Genius and Capacity, from Men of the same Turns of Mind, of the same communicative Temper, whose End of Study was the publick and universal Good of the *Society*.

WE may suppose in the Infancy of all Arts, they were crude and indigested, and, perhaps, found out by Accidents. The Search after one Branch of Literature, might produce the Discovery of something of more Moment, or foreign to that which was enquir'd after: But

## 12. LECTURES on

then the cultivating, the improving and refining those Arts, are owing to Society. Men in a State of Nature, without Books or Instructions in any *Science*, might, perhaps, be their whole Life in endeavouring to prove, that the Square of the Hypothencuse of a Right-angled Triangle, is equal to the Square of the Sides added together: And if Men had not communicated, in Society or by Writing, such Knowledge which they had acquir'd, we should still be setting out in dark Uncertainties, and the Residue of our Time might be employ'd in solving such Things which now appear familiar and demonstrative to every common Understanding. Those things which now are easy to be understood, if we had not been taught, but by mere Nature were forc'd to seek, would appear abstruse and difficult, and the Search after it might require an uncommon Assiduity, and, perhaps, when our strictest Application had been made, much Time employ'd, and weary'd ourselves in the Pursuit of it, we might have gain'd just as much Knowledge as we had at our first setting out.

ALL

ALL Countries and Ages of the World have experienc'd the Advantage of this one important Truth, That *Society* is the *Basis* of all Knowledge, the Spring and Source of *Arts* and *Sciences*, which have been propagated, improv'd, and handed down to us by succeeding Ages. *Greece* and *Egypt* had their publick Schools, which taught the fine Principles of Philosophy: *Pythagoras*, *Plato*, and others, laid the Foundations of them; and *Seneca*, *Cicero*, and the *Roman* Philosophers, built their Studies upon them. Later Times have produc'd innumerable Instances of the Success and Progress of Learning in the several Seminaries of Literature. The *Royal Academy* at *Paris*, the *Royal Society* of *London*, which by the Encouragement of Princely Favour have carried it to its most extended Length.

THE Universities of *Great Britain*, of *Holland*, *Germany*, *France*, &c. have all produc'd great and noble Genius's. *Sir Isaac Newton*, *Mr. Leibnitz*, *Mr. Whiston*, *Mr. Boyle*, and infinite Numbers of this present Age, whose extensive Knowledge has inform'd Mankind  
in



## 14 LECTURES on

in many difficult and abstruse Points, who have led Men to Truth, and are Patterns to future Ages; owe the Seeds of their Learning to such Education which they receiv'd from publick Schools and Societies to which they belong'd.

THERE is undoubtedly a sympathizing and attractive Principle in the Souls of the same Genius's: Men whose Ideas are nearly alike, are Byass'd by some hidden Secret in Nature to associate with each other. A philosophick Mind would be illy entertain'd with a Description of a Bear-baiting; and a Porter, or a Carman, would be little edify'd by a Lecture on Astronomy or Physicks; unless by Nature they had such internal Ideas capable of retaining or receiving an Impression from it: And you may see how such Men generally herd together, and are, perhaps, diverted as much with associating with each other, as the Philosopher, the Mathematician, the Architect, can be with Men whose Genius's square and tally with theirs.

FROM hence it must be inferr'd, that this Society consisteth of Men of the same Turn of Thought. There must be  
an

## ARCHITECTURE. 15

an Affinity in the Ideas, because no Self-interested Views, I think, can arise from our present Association; unless it be the one common Concern, the Improvement of each other in useful Knowledge. The Basis of it is on a firm Foundation, a friendly and amicable Communication of Thoughts without Reserve: And as I have had the Pleasure of proposing it, seconded by your ready joining with me in my Opinion of its Usefulness, I shall never be wanting to shew you how much I am obliged to esteem you for it; and for your favourable and ready Acceptance of the Offer I made in reading some Lectures on the Principles of Architecture.

I HAVE propos'd to divide them into such Classes that they shall be easily collected together; and when I have compleated the general Proportions, &c. with your Approbation, I intend to publish them, for the Service of such whose Genius leads them to the Study of Architecture, or such Branches which have an Affinity to that Science; and I shall interweave such Remarks with it, as shall make it an entertaining Amusement to you in your more private Retirements.

I HAVE

I HAVE but one thing more to add at present, that is, if any of this Society thinks it an Advantage, that they would impartially remark the little Failures which may possibly happen in my Discourse, and point out in what Places I am deficient, that I may rectify and endeavour to amend, or vindicate such Oversights, as they may appear by the different Lights in which they are view'd; and likewise join with me in ardently wishing an universal Success and Encouragement to the Progress of *Arts* and *Sciences*, and a kind Reception from those capable of supporting and encouraging such who are Professors of them; which will satisfy the Wishes of,

Gentlemen,

*Your Humble Servant.*

Read to the Society *October 22, 1730.*

LECTURE



## LECTURE II.

GENTLEMEN,



AT the first Meeting of this Society, I endeavour'd to shew you the absolute Necessity and Advantage of Societies in general, as they relate to the publick or private Welfare of the Individuals, both in respect to the Preservation of Rights and Properties, a Defence from Insults of Enemies, &c. and as it related to the Improvement of the Intellects of the Mind. But as Time would not permit to shew you the Necessity and Usefulness of Learning, and the Obligations we lie under to endeavour to cultivate and improve the Natural Genius, as far as Opportunity or Abilities will permit; I shall make it now the Subject of my Discourse.

LEARNING, in all its Branches, may properly be said to distinguish us from  
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one another, as well as from the rest of the Animal Creation, more distinctly than Speech. Birds acquire the Faculty of Speaking, but it is for the most Part misplac'd; it is only the retaining of such Words and Accents, which they have by frequent Repetition learn'd, but not knowing how to apply; like an Engine performing its Rotation, but insensible of its own Use.

As to Learning in general, I shall at present confine it to three great Branches, that is, Natural, Acquir'd, and Superficial; and as far as they appear useful to my present Intention, I shall define in their Turns.

NATURAL Knowledge, or what may be call'd a Natural Genius, are Seeds of Learning sown in the Mind at our first Formation, in the Womb. Mr. *Lock* terms them Innate Ideas, such which Nature has implanted in us. Though some dispute, at the Conception of some new Idea, whether that Idea be not eternally in the Mind, though our Faculty of distinguishing it has been dormant. But as this Speculation is too curious, and foreign to my Design, I shall observe,

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as to the Natural Genius, that many lively Instances of it have appear'd in the History of all Ages. The Man in whom the Seeds of Knowledge are sown, in spite of all the Obstacles of Fortune, will be still the same; the Ideas which Nature originally stamps on the Mind cannot be worn out. Poverty, Obscurity, want of Education, want of Opportunities of Improvement by Instruction, Books, Societies, &c. I say, in spite of all these Impediments, the bright Ideas will shine, they will appear beautiful through all the little Clouds of Fortune, and, like the Sun on the Surface of the Water, they will reflect their benevolent Beams on the Mind of those capable of receiving them. How unhappy is the Fate of that Man, whom Nature, in spite of all Obstructions, has supplied with a fine Genius, and yet wants the nice Correction and Care of *Art* to cultivate and improve, to draw by degrees from the Errors of ill-digested Opinions imbib'd in Minority, perhaps through the Ignorance of those under whose Tuition he was plac'd, and by setting out in an improper Path, renders him for ever incapable of making any great Progress in any Art, without by some

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skilful Mind he is instructed in a more perfect Way, and taught the first Principles by which the Knowledge of it is to be attain'd.

ACQUIR'D Knowledge flows from the improving and refining the Natural Genius. The Seeds of Learning, when sown first, are a minute Embryo; but by proper Methods made use of in the cultivating of them, they gradually arrive to Maturity. They must have suitable Principles instill'd, such which have an Affinity to the Nature of the Genius which is to be improv'd. Those Principles take Root, dilate and spread themselves slowly into Form, which, like a young Fruit-Tree, by pruning and regularly disposing, keeps from shooting into superfluous Branches. As Thorns do not produce Thistles, so it is impossible for the Man who has by Nature the Seeds of the Mathematicks born with him, to be otherwise; and the great Painter, the great Architect, the fine Genius's, are so by Nature as well as Art; and I do not doubt, but there are many great Men now buried in Oblivion, who, if they had the Happiness of Education, and the Fortune of Encouragement, might become

come equal to the Great Sir *Isaac Newton* in Philosophy, to *Raphael* in Painting, to *Palladio*, or *Inigo Jones*, in Architecture.

**SUPERFICIAL** Learning is the Shell, the Excrescencies of both : It is a gay, gaudy Outside, without Value ; a Multiplicity of Ideas, without Order ; a Shadow only, which the Possessor grasps at, imagining it a Substance. Mr. *Pope* has very justly describ'd the Character of such a one in his Essay on Criticism, where he says,

*The bookful Blockhead, ignorantly read,  
With Loads of learned Lumber in his Head, &c.*

And in another Part of the same Essay justly concludes,

*One Science only, will one Genius fit,  
So vast is Art, so narrow human Wit.*

Such a one who has only the superficial Learning, may be easily known by his dwelling upon the Surface of Controversy, or Arts, not daring to sink into the Principles or Spring of Things, or not having Abilities ; they are generally such  
whom



whom Education has been illy applied to, not having a Genius to receive it.

I HAVE thus far ventur'd to give you my Opinion of natural, acquir'd, and superficial Learning; I propose now to shew you the Uses of it, as far as it relates to Mankind in general, and Societies in particular.

LEARNING in general, is subservient to all, in all the Stages and Stations of Life: Our walking, sitting, lying down, rising, &c. are perform'd by Mechanick Powers; and though every one cannot discern it, or if it is not conceiv'd by the unthinking Part of Mankind, yet every Mathematician can demonstrate it: Every Action is perform'd by the Laws of Mechanism; the Motion and sudden Velocity of our Bodies, are the Effects of a Mathematical Power, and the Knowledge or Contemplation of it, elevates us a Degree above the rest of our Species, and distinguishes in a more eminent Manner from Brutes.

It is necessary for the Direction of Affairs in Societies, in making Laws, distributing Justice, &c. It is necessary in Trade,

## ARCHITECTURE. 21

Trade, Traffick, and Commerce; in discerning the Motion of the Heavenly Bodies; in Weights, Measures, Travel; in short, in every Thing which concerns Societies to be acquainted with:

With Reason, and Wisdom, Men first associated together, and form'd themselves into Societies; and by it they first fram'd and modell'd the Laws by which they propos'd to be govern'd. And without Knowledge in Navigation, Traffick and Commerce with distant Countries could not be had; nor could we judge of, or describe the Motion or Distance of the Planets, or the Time of their Revolution; by Geometry, Weights, Measures, and the Power of Bodies, are known; and indeed we find one Branch of Learning or another, useful in the whole Oeconomy of Human Nature. Besides all this, the Pleasures which the thinking Mind takes, in a Pursuit after Knowledge, are inexpressible. The *Astronomer* can soar from one Planet to another, and from one Region to another; till the Mind is lost in infinite Space; the *Geographer* can travel from one Country to another, through various

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## 24 LECTURES ON A

ous Climates, over Sea and Land, and encompass the whole Earth in his Imagination, and yet be only retir'd to his Closet, or contemplating in the Field; the *Painter* can see Groupes of Figures and lively Landskips, some shocking Precipice, or silent Glade, to divert his Ideas; the *Architect* raises in his Idea, Numbers of pleasing Structures, beautiful and proportion'd, with a regular Symmetry and a just Exactness; the *Poet* represents to himself beautiful Hills and Lawns, pleasing Vales and circling Rivulets, the purling Streams gliding through some gloomy Shade, the *Harmony* of Numbers and Nature.

THE *Mechanick* ideally sees Multitudes of various Machines for Conveyance of Timber, Stone, Water &c. all perfect and pleasing to his Imagination: The *Mathematician* has his Globes, Prisms, Quadrants, Triangles, &c. his Lines generated by the Parabola, Hyperbola, the Cathenarian, and others. All these, by a little Expansion of the Mind, are seen as natural as the *Statuary*, who ideally views in a Block of Marble a beautiful Statue, which only requires the Care and Skill of his nice Hand, to take away the gross

## ARCHITECTURE. 25

gross Particles of Matter which enclose it, whereby others may view it with equal Pleasure as himself.

LEARNING is a Topick which leads us from one Labyrinth of Pleasure to another; it is as extensive as the Universe; it consisteth of infinite Divisions, which disperse themselves into innumerable Branches; and if we trace it from one Chain to another, it never loses its Lustre; its Beauties are always apparent, and whatever Shape you view it in, it still charms you: It is a Jewel of inestimable Value, and he who possesseth it enjoys every Thing desirable. The Goods of Fortune, by multitude of Casualties, perish, and are destroyed: Earthquakes, Inundations and Tempests, impoverish and ruin many Countries; but no Misfortunes can shock the Mind of the Philosopher: In Prosperity or Adversity, he is the same: His Wisdom, by making Excursions into the Channels of Fortune, makes every Stage of Life equal. Knowledge is acquir'd by Study and Assiduity, and by cultivating those Natural Faculties which are planted in us.

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WE should endeavour to discover which way Nature has directed the Channel of our Genius. If to the Mathematicks, such Branches of Learning which lead to those Arts, should be carefully learnt, and not stop the Current of that *Rivulet* by throwing in Lumber of Law, History, &c. which are contrary to Nature's Design. Nor must he who designs to be an Architect, load his Mind with Politicks; he will find Matter enough in the several Branches of that alone, to employ his whole Study to become Master of: No Art is so narrow and confin'd, but it will take up much Time to be acquainted with; and it is better to know one Thing perfect, than superficially to know many. There are many Branches of Learning in every Art, and those Paths which lead to them should be carefully trod: Circumspection and Diligence are requir'd to compleat the Performance, and a close Application should be observ'd in the pursuit of our Studies.

ARCHITECTURE is certainly not only a pleasing, but extensive Science; for by varying and changing the Modus, there will always spring new Ideas, new Scenes,  
for

## ARCHITECTURE. 27

for the Imagination to work upon ; the Fancy of the Designer may be always entertain'd, and the different Branches of Architecture will furnish him with something of an *Amusement*, which gratifies the Eye as well as the Understanding.

It will be necessary for the *Architect* to know as much of *Geometry*, as will enable him to delineate regular or irregular Plans, &c. to furnish him with Reasons for the Capacity of supporting Weights, which will often require Geometrical Constructions to explain ; to describe the external Part of a Fabrick by Perspective Elevations, or the internal by Sections, &c. all which are founded on the Principles of Geometry.

THE *Architect* should be acquainted with *Arithmetick*, to be able to make an Estimate of the Expence of the Building ; to measure and settle the several Works of the Artificers ; to make up the Quantities of Monies expended, and the balancing the Accompts between the Workmen and the Person who employs them. Likewise *Arithmetick* furnishes him with Proportions of Numbers, in harmonick and arithmetical Progressions, to regu-

late the external and internal Parts of the Fabrick, which I shall delineate in the Course of these Lectures.

HE must have such an Idea of *Musick*, as will conduce to judge the Nature of Sounds, their Accords and Discords, their Affinity with Proportion, in erecting Rooms of Entertainment, in Theatres, Churches, &c. in which Places Sound is more immediately concern'd.

OPTICKS will be requisite to be understood, as far as they relate to Proportion of Light in large or small Rooms, or as the Situation is to the four Cardinal Points, in which the adapting the internal Apartments, as the Hall, Salloon, Parlours, Withdrawing-Room, Dining-Room, Library, &c. are to have proportional Lights, according to their Magnitude and Situation; or in Town Houses, where Room is wanting, and Light more difficult to attain, there will more Knowledge of Opticks be requir'd.

HISTORY will be necessary to inform him of the State of *Architecture* in *Greece* or *Rome*, in its Infancy: The Manner of their publick and private Buildings;

## ARCHITECTURE. 29

Buildings ; their Magnitude, Beauty, &c. which have been handed down to us by undoubted Records, and by which he may regulate and dispose the Apartments in publick Buildings for the Convenience, &c. which they require.

A LITTLE *Philosophy* will not be amiss, to inform the Architect of the Nature of Materials ; the Qualities of Wood, Stones, Earth, Minerals, &c. Even in the Choice of Situation, the Temperature of the Air, the Nature of Waters, Plants, Vegetables, &c. which Nature produceth in different Situations.

THESE are the Ingredients of Learning, which are to be blended together for the Use of an Architect. It is not requir'd that he be a compleat Master of each, but only to know as much of them as he can explain for the foregoing Purposes. There are few who have a Genius to take in more than these Branches for any Science, therefore a skilful Designer must consequently have taken much Pains to become Master of *Architecture*, including those Divisions of Learning which are to be by him thus understood.

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As to a Knowledge of the Five Orders of *Architecture*, indeed they are commendable, but it is only the Entrance, the first Branches of the Art; the great and valuable Parts of it consist in Designing well, to appropriate the several Parts to Use, and make them have an Affinity with the whole: But this only is the Gift of Nature, no Art can teach a Man the way to attain it, unless Nature has laid the Foundation; and those which I have mention'd, may be said to be only Assistants in cultivating and improving the natural Genius.

BEFORE I proceed to the Application of Buildings, to different Situations, or the Uses of the Orders themselves, I shall trace *Architecture* to its Fountain, and consider it in its infant State, and by what Steps it has been handed to different Countries, and its Arrival to Perfection: But as that will take up too much of your present Time, I shall make it the Subject of another Lecture.

I SHALL only add, that I could wish to see Emulation rise among us, striving who should excell in doing good Offices  
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## ARCHITECTURE. 31

to each other ; to be instructed by, and assistant to each other, in every *Science*, as far as your Abilities will extend ; to see the *Mathematicks* and *Architecture*, and the several dependent Branches of *Literature*, become the Pleasure of your Discourse, the Delight of your Studies. This, in the End, would be useful and entertaining to yourselves, and an Example worthy of Imitation to others ; and in this we should raise a Monument which neither Time nor Envy could deface ; and, perhaps, in future Years, it may be said, you laid the Foundation to a *Society* chiefly instituted for propagating Knowledge without self-interested Views. The Memory of such an Undertaking, to be transmitted to distant Time, will redound much to your Praise, and is the sincere Wishes of

*Your Humble Servant.*

Read to the Society October 29, 1730.

LECTURE



## LECTURE III.



IN my last *Lecture*, I propos'd to give you a Description of the Rise, Progress, and Extent of *Architecture*, which I intend the Subject of this Discourse, having for that Purpose perus'd those Authors who have transmitted to Posterity the Labours of the Antients. Building, in its Minority, was, doubtless, not only plain, but irregular; Men studying the Uses of the several Parts of the Fabrick, more than Beauty, till Societies began to increase in Wealth and Number, by Traffick and Commerce, then they rose in their Idea to the Knowledge of some sort of Regularity and Proportion in the disposing the several Parts of their Building; but even this Proportion may be supposed to be known long before the *Orders* were instituted.

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WHEN Arts and Learning became famous in *Egypt*, we may suppose with them *Architecture* flourish'd; for we find Works very Elaborate mention'd even among the great Designers Contemporary with *Noah*. In the Year of the World 2038, the Walls of *Babylon* are reported to be built by *Semiramis* very magnificent, and esteem'd one of the Seven Wonders of the World; and the Tower of *Babel* is a remarkable Instance of the early Knowledge of Building: those two famous Pillars, the one of Brick, the other Stone, erected soon after the Flood by the Sons of *Noah*, on which were recorded the remarkable Passages from the Creation down to the Flood: I say these are Testimonies of an early Progress in the *Mathematical* and *Architectural Arts*.

BUT the cultivating and improvement of *Architecture* is reported to be owing to the *Egyptians*, from their famous Labyrinth adorn'd with *Columns of Porphyry*. The *Grecians* rais'd an everlasting Monument to their Genius's in the Labyrinth at *Crete* built by *Dedalus*. To *Egypt* the first *Grecian* Architects were  
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used to travel, as our Modern Architects do to *Rome*, to refine and improve their Genius's, and to apply their Studies to the Rules of their Art. Perhaps the *Egyptians*, in building their Labyrinth, imitated Nature; for as Mazes are form'd by various Turnings and Windings, cut through the luxuriant Bushes growing wildly among Woods or Trees, and by forming a kind of *natural Arch*, to shade and make the Paths more solemn and secret, so the support of those Arches might be some more eminent Trees, which when pruned of their superfluous Branches, represented so many Columns, and by a little more pleasing Form, as to Disposition and Shape, undoubtedly their Labyrinth was delineated and erected, and even the *Orders* themselves must have had their Rise and Institution from such Imitation of *Nature*.

*CADMUS*, the Grandson to *Agenor* King of *Tyre*, 562 Years after the Walls of *Babylon* were built, brought the *Arts* into *Greece* from the *Phœnicians*, and built *Thebes*, call'd so from the famous *Thebes* in *Egypt*: And we find that about 300 Years after the Foundation of *Rome* was laid, that *Phidias*, an *Athenian*, built

## ARCHITECTURE. 35

built a Temple of the *Dorick* Order, whose Height was 68 Feet to the Roof: The Antients never made use of but one *Order* in the Height of their Buildings, after the Manner of St. *Martin's* Church built by Mr. *Gibbs*: Now let us suppose the Base, Shaft, and Capital, of the *Dorick* Order, to be eight Diameters in Height, and the Entablature two Diameters, we find that the Diameter of those Columns was six Feet nine Inches and half, which I only mention to shew in what Perfection *Architecture* was at that Time, and in such Esteem that the most *sacred* and *magnificent* Structures were not perform'd without an exact Regularity and Proportion.

*GREECE* was furnish'd with noble Monuments of Building, which were brought to *Rome* by *Marcellus*. The Temple of *Jupiter Olympus*, the Temple of *Circius*, which *Pliny* reports was so rich and curiously wrought, that in all the Joints of the Stone, Threads of Gold were inlaid to separate them: The Temple of *Trallius*, of *Diana*, of *Pallas*, of *Minerva* at *Athens*, of *Apollo*, &c. all so testify the Nobleness, Use, and Beauty of *Architecture* before it was

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brought to *Rome*, that the foremention'd Author relates, that *Cecrops*, the first King of *Athens*, 200 Years before the Destruction of *Troy*, founded a School for the Instruction and Encouragement of *Architects*; and it would only weary your Attention, to repeat more Instances of its Beauty and Perfection, in the early Ages of the World.

IF we reflect on the beautiful Grandeur, and inexpressible Magnificence, of many of those never-dying Works of antient *Greece*; if we think on those *lively Ideas* which many worthy and immortal Genius's have given us of its State, and also reflect on the Felicity, the Happiness we enjoy, in having the *Art* so carefully preserv'd, when all *her* stately *Cities* and *Temples* are destroyed, and their Names, perhaps, buried in their Ruins: I say, if we weigh this, we cannot value or esteem *Architecture* too much; its Beauties, in spite of devouring Time, will still charm us; the gay, the glittering Image, shines with gleaming Rays of Light on the several Passions of the Mind; according to the Symmetry and Disposition of their Works, we behold them with Admiration, and they

they soften us into unutterable Pleasure.

*GREECE* happily perfected the *Arts*; but *Rome*, rais'd by Ambition; *Prometheus* like, stole *Architecture* from her, and laid desolate its Glory. The Emperors pull'd down their stately *Edifices* and *Temples*, and transported to *Rome*, and there confin'd, the Art and Materials, to raise a Name to immortalize themselves and Posterity.

*ROME*, possess'd of a Prize so glorious, and of so inestimable Value, and at the same Time Mistress of so many populous Kingdoms, selected together the greatest Artists of those Times, and, by an unwearied Pursuit, trac'd the Paths and Footsteps of the worthy *Grecians*, both in *Learning* and *Government*. *ATHENS* furnish'd them with exemplary Rules; and, being naturally aspiring, they endeavour'd to shew the excellent Perfection of *Architecture*, in the several noble Structures and Temples which they erected to the Honour of their Emperors; and the victorious Conquests they made, whose Remains continue even to this Day, in the Works of those great  
Genius's



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Genius's who flourish'd in the 14th and 15th Centuries.

*MARCELLUS*, happy in Victory as well as a fine Genius, brought from *Greece* one of the most beautiful and regular Pieces of *Architecture* extant, which is in the Theatre call'd after his Name. And *Pompey* the great though unfortunate Hero, is reported by *Tacitus* to have built the first Amphitheatre at *Rome*. The Baths of *Dioclesian*, the Palace of *Nero*, the *Rotunda*, the Theatres, and upwards of 50 Temples dedicated to their Deities, their Triumphal Arches, &c. give us a vast Idea of the Perfection of *Architecture* at *Rome*, in its flourishing State under the Consuls and Emperors: They were so much given to building, that they endeavour'd to *excel* each other in Pomp and Magnificence in the publick Edifices they erected for the Ornament and Use of the City.

It was a happy Time, when distant Ages, which long since has roll'd away, should have so just a Taste of the excellent Perfection of *Architecture*. The Richness and Expence of so many magnificent

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*mificent Structures* in Times of Peace, exercis'd the busy-minded, and kept their Government in a quiet and regular Manner: But when *Architecture* declin'd, Insurrections and domestick Wars chang'd their manner of Government, and unhappily fell a Victim with it, after it had been in a flourishing State at *Rome* upwards of 700 Years.

WE have seen *Architecture* in its beautiful State, in its meridian Lustre and highest Perfection.—Extreams in all Things must suffer Change.—*Architecture* stood long the Glory of *Rome*, but *Fate* suffers it to be buried in Oblivion near 800 Years—successive Ages of Ruin and Desolation! Nothing but Fragments are left; and where famous Cities and noble and magnificent Structures once rear'd their lofty Heads, now are nothing but a wild uncultivated Scene of Desolation.

**ALARICUS**, King of the *Goths*, about the Year of Redemption 412, took *Rome*; and after that *Oadoacer*: And *Genfericus* King of the *Vandals*, brought 300,000 Men out of *Africa*, and made it waste and almost desolate, in the Year 456.

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In short, *Ignorance* and *Brutality* had so infatuated that Age, that they conspir'd to ruin and destroy all the stately Structures which the *Romans* had built for the Encouragement of Arts; for which Purpose the *Visigoths* in *Spain*, the *French* in *Gaul*, and the *Vandals* in *Africa*, unanimously agree to compleat the Destruction; and in the Year 596, the *Saracens* destroy'd and laid in Ashes a fine City named *Messina*, not far from which was the beautiful City of *Cuma*, whereof is the Remains of a fine Arch call'd *Arco felici*, an antient Performance; and at *Naples* remains the Gate of *Castor* and *Pollux*, whose Measures are transmitted to us by *Palladio*.

I HAVE pass'd over a Scene so shocking with as much Brevity as possible, to shew you that though *Architecture* lay buried in Heaps of Ruins 800 Years, though nothing was practis'd but in the rude *Gothick* Manner, yet the 14th Century produc'd Genius's who brought *Architecture* from its Tomb, and rais'd it, like the *Phoenix*, to new Life from its Ashes; which was by settling an Academy at *Florence* in the Year 1400, in which were many great and noble Genius's

## ARCHITECTURE. 41

nius's and Students, who by inspecting into the Ruins, (if it be not improperly speaking) once more perfected the Art.

IN this Academy was *Lawrence Ghiberto*, a Goldsmith by Profession, who built the Church of St. *Mary delli fiori* at *Florence*, which, among the Judges of the Beauties of *Architecture*, is had in equal Esteem with the Productions of the celebrated *Palladio*.

IT would be endless to mention the great Genius's of which the Academy was compos'd, or who flourish'd in the 14th and 15th Centuries, since their Works sufficiently testify their Care and Assiduity, to preserve the Beauties of the Antients in Building, and of which our young Students in *Architecture* have the Pleasure of many of them translated into *English* for their Instruction; especially those of *Palladio*, which, by the Care of Mr. *Leoni* and Mr. *Cole*, who in a more particular Manner have made the Works of *that* great Master useful to all that make the Study of *Architecture* their Delight.

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BUT the greatest Happiness to us, is the having *Architecture* in as much Perfection as ever it shone in at *Rome*, and even practis'd by a few Persons, whose excellent Taste of the Art leads them to follow these Paths. But this is chiefly owing to *Inigo Jones*, whose Qualifications, join'd with a felicitous Opportunity of travelling to *Rome* and other contiguous Countries, gave him so sensible and strong Ideas of the Beauties of the Ancients in *Architecture*, that he met with a deserv'd Encouragement in the Practice of the Art; which may be seen in the many beautiful and regular Buildings which he design'd or erected, and by the Care of the Right Honourable the Earl of *Burlington*, are collected together in Miniature.

THE Manner of the antient *Architecture* is Grand and August; there is something Solemn and Awful in it: It consists of large and ample Divisions, a bold *Relievo*, and regularly proportion'd: The Parts were analogous to the Whole, and perform'd with so exact Adherence to Harmonick Rules, that their Buildings, as well  
Internal

## ARCHITECTURE.

Internal as External, so charm'd the Mind of the Beholder, that the Architects were often, by the Vulgar, thought to be inspir'd, when, in Fact, the Beauty and the Pleasure their Works gave, were only the Effects of a well-chosen Symmetry, connected together according to the Harmonick Laws of Proportion; which of Necessity produce that Effect upon the Mind through the Eye, as the Chords or Dischords of Musick affect it through the Ear.

THEIR Decorum was always just in every Representation, whether serious, jovial, or charming: For this End they establish'd a certain *Modus*, to be observ'd in the Use and Application of the several *Orders*; and by these Rules they always kept pace with Nature, and still, by a strict Observance of them, they produc'd the various Effects for which they were intended. The *Dorick* Order was to grave and solemn Uses, and call'd the *Dorian* Modus: The *Ionick* Order to Riant Uses, and call'd the *Ionian* Modus: The *Corinthian* Order was us'd in Palaces, &c. and call'd the *Lydian* Modus.

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THE Use, Application, and Proportion of these Orders, I intend the Subject of ensuing Lectures; in the mean while remain,

*Yours, &c.*

Read to the Society, Nov. 12, 1730.



LECTURE



## LECTURE IV.

GENTLEMEN,



SUBJECT so beaten and exhausted as that of *Architecture*, will undoubtedly require a better Genius to engage your Patience; to some few Remarks and Observations, which, for my own private Amusement, I have made since our last Night's Meeting; and, perhaps, they may be so illy-digested, and irregularly plac'd, as not to merit your Notice. However, as my chief End and Design is rather a Divertisement to some few Friends, by whose Importunity I have been prevail'd on to renew some former *Lectures*, I shall, without farther Apology, beg your Attention.

My last *Lecture* consisted chiefly in an historical Description of *Architecture* in general, confin'd to such particular stated  
Periods



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Periods of Time, as have been handed down to us by History or Tradition; and I think I endeavour'd to make it apparent, what Changes, and Vicissitudes of Fate it has undergone, since it receiv'd that Perfection and Beauty from the *Grecians*, even from *Pericles* to *Marcellus*, and so progressively to *Inigo Jones*, and that great Genius Sir *Christopher Wren*. I now propose to shew the Difference between the Antient, the *Gothick*, and our Modern *Architect*, without Prejudice or Partiality, confining myself to such particular Observations only, which are necessary to instil the first Principles of *Designing* into the Minds of young Students in *Architecture*.

It may not be amiss, for the better understanding my Design in this *Lecture*, to shew what is the chief Care of an *Architect* to observe; which is *Regularity* and *Proportion*: those are the most essential Parts to be consider'd in the Art of *Designing*. That the Antients had this Happiness, of Thought in View in their Performances, is undeniable; and in many Particulars I shall make it apparent, when I draw a Parallel between the Antients and Moderns; and, perhaps,

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perhaps, in so obvious a Manner, that none of you can mistake what that Difference consisteth in, and by what Methods an adequate Knowledge of the Antients may be attain'd.

IN my last *Lecture* I observ'd to you, that the *Gothick* Architecture prevail'd in *Italy*, and throughout the rest of *Europe*, after the Desolation made by the *Vandals* and *Saracens*, about 930 Years, and so continu'd till the Year 1400, in which an Academy was settled at *Florence*, which reviv'd the ancient *Architecture* in many of those Buildings now remaining, which were by them then perfected.

REGULARITY and Proportion are the fine Parts of *Architecture*, and these are perform'd by stated Rules, handed down to us by the Care and Vigilance of preceding Ages, to whom we owe all our Knowledge, as well Historical as Architectural. I say Buildings are to be perform'd by stated Rules, as the several Parts of Musick in Concert are; in which, if one Instrument is illy tuned, or in a different Key, it immediately creates a Jarring and Discord, which is  
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not to be remedied without setting aside that Instrument, or putting it in a proper Key with the rest: The same Rules perfect *Architecture*, and are essentially necessary in its Performance; which I shall shew by and by.

THE *Goths* and *Vandals* were a rude, barbarous, and unpolish'd People; and, perhaps, that *Architecture* which is call'd the *Gothick*, deriv'd its Name only from its rude and ill digested Form, not much differing from that unrefin'd Part of Mankind; having in their Aspect and Deportment, a Rusticity and Wildness not to be imitated; and as they ravag'd *Europe*, and spread themselves over most Part of Christendom, it might become a Proverb amongst Men, to term every thing *Gothick* which was irregular, disproportion'd, or deform'd.

THE Art of *Designing* was undoubtedly lost in those dark Ages, when Men were led blindfold to Learning, through the Caprice and Humour of a Set of Men who endeavour'd to engross that refin'd Part of our Species to themselves; and their Care of something *less* material might prevent them from speculative Enquiries

quiries about Arts and Sciences, contenting themselves with the vulgar *Goss* and Opinion, esteeming the severe Discipline of Study, either too difficult, or unworthy of their Notice; so Errors, by Degrees, were introduc'd, cherish'd, and practis'd, without Regard or Enquiry into the Reasonableness or Unreasonableness of its Performance.

If we look upon that great expensive Building of *Westminster-Abbey*, erected by *Edward the Confessor*, about the Year 1060, take in all its Parts, its Proportions, or Symmetry, it appears only a heavy, lumpish, unrefin'd Mass of Materials jumbled together without Design, Regularity, or Order; the Middle Isle is too long and too high for its Breadth: The Symmetry of the External Part has no Analogy to the Internal; the Multitudes of little Pillars have no Proportion to the Parts to which they are connected; the Windows are perform'd without Rule, without Beauty, or Design; and if they happen to fall into a kind of Proportion, it is only blind Chance which inadvertently leads them to it. If we take a Survey of all our ancient Cathedrals, such as *Salisbury*, so much wonder'd

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der'd at, there is nothing worthy our Notice, but the Height of the Spire, and prodigious Expence Men have been at to perpetuate their Folly to future Times. The Riches which have been exhausted from the Natives of this, as well as other Countries, to erect Abbies, Monasteries, Nunneries, Churches, &c. and the large Endowments left to support them, need not give Men much Trouble to think why so much Pains have been taken to render them as beautiful as their Genius's would reach to make them.

If the profuse Millions of Money expended in forming so many *Gothick* Buildings in this Kingdom; had only been appropriated to erecting Seminaries of useful Learning, and in so beautiful a Form as even some of our Moderns have a Taste of, with what Elegance and Splendour would this Island shine, and become more than Competitor with Rome in all its Glory. Compare old *St. Giles's*, or old *St. Martin's in the Fields*, Churches, with their new, and every one will undoubtedly see what that Symmetry is which gives such Pleasure to the Eye of the Beholder. I do not say these are without Faults, but they are so few, com-

## ARCHITECTURE. 51

compar'd with any *Gothick* Edifice, that they seem not to be; and I believe the Expence of the old trebly exceeded either of the new, in Proportion to the Value of Money when each was built; we see partly an Instance of this in the Repairs of the *Gothick* Works; what Time, what Waste of Materials, &c. do those Reparations make.

WHAT I have said is to shew not their WANT of Encouragement; but Taste and Genius, at the Times when that rude, irregular way of Building prevail'd throughout *Europe*; while the noble Structures of antient *Rome*, the Baths, Triumphal Arches, Temples, &c. lay demolish'd by envious Time, and scarce any thing remain'd of pure *Architecture* but its Ruins and Name.

As *Palladio*, if not the first, was the chiefest Restorer of Antiquity, and by whom our Moderns are principally guided; I shall endeavour to shew you his Blemishes as well as Perfections, whereby you will be render'd capable of avoiding the one, and embracing the other. As Buildings, by Time, were beautified and regulated under certain Proportions allot-

## 52 LECTURES ON

red by the Antients, so they were adapted to the Strength requir'd in the Edifice to be erected; and under the Difference of these Proportions of Heights and Distances which the Antients made use of to each *Order*, are still preserv'd all the Beauties contain'd in *Architecture*, and are to be varied as extensively as the Mind can invent, differing only in the Form or *Modus*; as the Multitudes of Tunes are perform'd by only the seven Notes in *Musick*.

UNDER these Proportions may be consider'd the *Orders* distinctly, either with, or without their *Pedestals*, those being contriv'd only to raise the *Column* or *Pilaster* to such a Height which was requisite to perform its Office, without having the Assistance of another *Order* over it, which is repugnant to all the Rules of *Architecture*, and the Practice, in particular, of the Antients.

*PALLADIO* justly observes, that there is an absolute Necessity of a strict Adherence to the Practice of those Rules and Proportions of the Antients which those Persons who measur'd the Ruins of Antiquity laid down from the Buildings

## ARCHITECTURE. 13

ings themselves, which they collected in Fragments, and transmitted to us by particular Measures; though, perhaps, he sometimes follows the Caprice or Humour of the Person for whom he built, or the Custom which most prevail'd in *Italy* at that Time; for he sometimes deviates from that Nobleness and Grandeur which appears in those Buildings erected with one *Order*, which may be easily discern'd by comparing Plate 2d, 54th and 55th, with the 15th, 35th, 47th and 60th of the second Book; the two first of which being of the *Ionick*, and the other two of the *Corinthian* Order, with proper Intercolumniations, only *one Order* in the Height of the Building.

**THE** Antients never exceeded three Diameters Intercolumniation, except in the *Tuscan* Order; but then they never made them less than one Diameter and half, generally approving the Mean between three Diameters and one and a half, which is that Proportion call'd *Eustylos*, of two Diameters and one fourth, appropriating it as a mean Proportion to the *Ionick* Order, the *Diastylos* to the *Dorick*, and the *Systylos* to the *Corinthian*, which in  
all



#### 14 LECTURES on A

all their Temples and Edifices they strictly observ'd; as may be easily prov'd by the Temples of *Vitruvius*, and the *Roman* Antiquities collected by *Serlio*, *Palladio*, *Desgodetz*, *Montfaucon*, and others, who measur'd exactly the Remains which Time had left.

THE Reasons which induc'd the Antients and their Imitators to follow those due Proportions in Intercolumniations, were, that if small Columns are made with large Intercolumniations, it will very much diminish their Beauty; for the too great Quantity of Air or Vacuity between, will lessen their Thickness in Appearance to the Eye; and large Columns, such as those at the Admiralty, by having small Intercolumniations, makes them appear heavy, thick, and disagreeable; more especially as the Sides of the Building, instead of falling from the Front, advance, and contract the circumambient Space which should add to the Proportion of so large Columns.

THE Antients taught us, that if the Distance or Intercolumniation be three Diameters, the Column should be seven and one half; or eight Diameters high, as the  
*Dorick*,

*Dorick*, having the *Diastylos*; if two and one fourth, the Columns should be nine Diameters high, as the *Ionick*, or Proportion *Eustylos*; and if of two only, the Columns should be nine Diameters and one half high, as the *Corinthian*, with the Proportion *Systylos*; in which the Uses may serve for that Variety of Examples of Intercolumniations which *Vitruvius* makes Mention of in the second Chapter of his third Book.

IN the Ancients, and their Imitators in *Architecture*, have been thus curious and observant of the different Intercolumniations, they ought as closely to be followed as any Proportions of *Architecture* in General and Particular; and if to the *Corinthian* Order I give six Diameters Inter-columniation, I may as well make its Height twelve, and let the Capital be two Diameters, the Monstrousness of such Proportions would soon discover the Weakness and Singularity of the Person who should so far deviate from the establish'd Rules of Antiquity: Therefore I shall from hence make it appear, that two Orders erected one over the other in the same Range of Building, is contrary to all the stated Rules of *Architecture*,

ture, and renders a Design so perform'd, disagreeable to the Eye, and contrary to the Mathematical Principles of *Architecture*.

FIRST, It is contrary to all the stated Rules of *Architecture*. If the *Ionick* Order has been by the Antients allow'd to have only two Diameters and one fourth Intercolumniation, and on that you erect the *Corinthian* Order, whose Diameter at Bottom shall be equal to the Top of the Diameter of the *Ionick* Column underneath; then the Intercolumniation of the upper or *Corinthian* Order, instead of being the Proportion *Systyles* for the *Corinthian* Order, will increase to more than the Proportion *Dyastyles* or three Diameters allow'd only to the *Dorick*: Therefore it is the severing the Rules of *Architecture*, to give such Intercolumniations to one Order, which have, perhaps, never been extended to another more capable of discharging the Weight, which both Art and Nature is suppos'd to have Place there to support.

SECONDLY, It renders a Design so perform'd, disagreeable to the Eye, and contrary

contrary to the Principles of *Architecture*. For Instance, the *Dorick* Order is more robust and massy, and by its Proportions render'd more capable of supporting any Weight, than the *Ionick*, for which Reason it has a greater Inter-columniation given to it; if therefore to the *Ionick* Order I allow the Inter-columniation of the *Dorick*, I consequently revert the stated Rules of the Antients, and lay on it a heavier Burthen than Art and Nature intended for it: And if on the *Dorick* and *Ionick* I place the *Corinthian* Order, I give five Diameters or more Inter-columniation, which even the *Tuscan* is not allow'd, unless in *Arcades*; therefore they must be contrary to the Mathematical Principles of *Architecture*. How can a light, effeminate, tender Order, support at such prodigious Distances, a Burden which the more robust and strong have been, by repeated Practices, prov'd incapable of sustaining?

THIRDLY, The introducing more than one Order in the Elevation of a Building, if not a modern, is a capricious Invention. Observe the Temples and publick Edifices of the *Greeks* and *Romans*; they have but one Order, because the Orders can-

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not be suppos'd to support a Floor if they are Insular; and being attach'd to a Building, the Walls discharge the Weight of the Floors, the Duty of the Columns being only to support the Entablature and its dependant Weight. Likewise the Beauty and Grandeur of those Designs of one Order only, may be seen in the Temples, &c. I before mention'd; especially if you compare them with the 54th and 55th Design of *Palladio's* second Book of *Architecture*.

WHEN I mention those two Designs of *Palladio*, I am to observe, that he so far disowns them for Examples of Practice, that he says they were made while he was young, and calls them in his Description, New Inventions of his own, and had not been executed; and if *Palladio* seems sometimes inconsistent with himself, our great Moderns have fallen into as unpardonable Errors. Even the immortal Mr. *Gibbs*, in that beautiful and noble Building of St. *Martin's* Church, has so far outdone that Design of St. *Mary* in the *Strand*, that the Genius of the same Author is no way visible, and they seem as different in the Design, as if it were one of *Inigo Jones*,

## ARCHITECTURE. 59

*Jones*, and the other of *Sir John Vanbrugh's*;

I cannot help making Use of that fine Distich of *Mr. Pope* in his *Essay on Criticism*, when he speaks of Men differing from themselves at different Times, he says,

*As when the Wit of some great Genius shall  
So overflow, that is, be none at all.*

Therefore at that Time *Palladio* might have a Superfluity or Overflowing of Genius.

BUT to return to the Practice of the Ancients in raising Buildings to a requisite Height: They either erected the *Orders* on a Pedestal, or on a Rustick Basement; or if that prov'd insufficient for its Magnitude, they plac'd an Attick over the *Order*: This has among the Ancients been frequently practis'd, especially in their Triumphal Arches, which our Moderns may be said to have justly imitated.

THAT which I now principally aim at, is to have every one of you judge in

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this nice Crisis of Designing for himself; for which Purpose I propose, for your Speculation, two of the greatest, the noblest, and most noted Buildings in the World; both erected in different Countries, both dedicated to the same Use, and both the Glory and Ornaments of the greatest and most renown'd Cities in the Universe: I say, those two Buildings *St. Peter's at Rome*, and *St. Paul's, London*, I place before you, as Patterns, to engage your Notice and decisive Judgment. *St. Peter's at Rome* had its first Design from *Bramante*, a famous Architect, who flourish'd in *Italy* about 250 Years since; and receiv'd its last Model from the great *Michael Angelo*, about 30 Years after the Decease of *Bramante*; and both design'd it, as it is now erected, with only one Order.

*St. PAUL's* was the Design of our own Countryman and great Architect Sir *Christopher Wren*, a Genius, for the Principles of the *Mathematicks* and *Architecture*, universally esteem'd; but, I think, has so far deviated from the Paths of his Pattern, *St. Peter's*, that he has thought proper to omit the *Attick* above the Order which is in *St. Peter's*, and has made

two

## ARCHITECTURE. 61

two *Orders* one over another. The Similitude of the rest of the Parts, when you compare them, will, perhaps, give you a singular Pleasure, beyond what I can describe, without delineating the Objects themselves, and placing them in that just View which of yourselves you will undoubtedly take.

FROM this Point I might descend to many general Observations of Form, Magnitude, and Proportion, and from thence to Situations, Materials, and Orders in particular; but as this *Lecture* has already intruded on your Patience, I shall refer it to, perhaps, some ensuing, when Time and Opportunity offers, and that it may be thought worthy your Notice.

GENTLEMEN, in a Description of this Kind, it is impossible to make use of those florid Expressions, those eloquent Descriptions and rhetorical Sentences, which might have been expected from me, in a Discourse of another Nature: Therefore the Defects in my Language, must not be imputed to my want of Abilities in this Particular. I have only consulted the Genius of my Friends, the  
Truth



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Truth of my Assertions, and the Sincerity of my Desires, in being accessory to every good Office which may procure Knowledge; and if I miss in my Design, I hope the want of such Success will not be imputed to the want of Judgment, in one that at least meant well; who is likewise,

Gentlemen,

*Your most Humble Servant.*

Read to the Society, Dec. 31, 1732.



LECTURE



## LECTURE V.

GENTLEMEN,



T the Conclusion of my last *Lecture*, (which was a Description of the Antient, the *Gothick*, and our Modern *Architecture*) I propos'd to shew you what kind of Situations suit with the different *Orders*, and what kind of Proportions are to be used, for preserving a strict Regularity and Harmony ; with some useful Reflections on Examples of publick and private Buildings ; in which the Application of the *Orders*, and Choice of Situation, are, or have not been consider'd by the Builder ; which I now propose to make the Subject of this *Lecture*.

WHEN I speak of Situation, it must not be suppos'd that I mean proper Choice of it in Towns or Cities, where  
every

## 64 LECTURES on

every *Order* is promiscuously perform'd, and, perhaps, in the same Pile of Building; but I would be understood, such Situations which are the proper Choice of Retirements, where a Sameness should be preserv'd between *Art* and *Nature*.

CONVENIENCE is certainly the first Thing to be consider'd in Choice of Situation; what Supplies of Water, of Provision, of Carriage, &c. can easily and speedily be attain'd: For without these principal and necessary Conveniencies, for the Support of little Commonwealths of Families, a Structure would soon be deserted, and left a Residence only for the Fowls of the Air to retire to, from the Inclemencies of the Seasons, and a Place of Repose.

BUT it is at the same time to be observ'd, such Situations which produce such Supplies, are not difficult to be found: And, perhaps, with the Additions of a healthy and fertile Soil, uninterrupted Vistas and Avenues, an agreeable River, or some opening Lawn, or at least a distant Groupe of Hills and Vales diminishing from the Eye by a pleasing Gradation: I say such an agreeable Spot  
of

## ARCHITECTURE. 65

Of Ground, where Nature wantons in Luxuriancy, is the first Care of a Builder; and by a proper Design compos'd to blend Art and Nature together, must consequently render it the Delight of the Inhabitant, and give an unspeakable Pleasure to the Eye of every Beholder.

A PERSON who builds on such a useful and delightful Glebe, must doubtless not only agreeably improve that *Fortune* which Providence has supplied him with, but likewise perpetuate his Judgment to his Posterity; it must render his Off-spring a Happiness and Pleasure, which gives a true Relish to Life. But he who, on the contrary, lays the Foundation of his Fabrick on a barren or unpleasant Soil, or on a bleak Wild which Nature seems to have deserted, is, consequently, only perpetuating his Folly to future Ages.

BUT it is to be observ'd, that every one that builds has not an equal Felicity in the Opportunity of chusing a fine Situation; therefore some must fall into little Errors and Inconveniencies: But it were better to have an ill-shap'd Hand or Leg, than to have none. Therefore Conveniency must be preferr'd to Beauty;

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and

## 66 LECTURES on

and the fine Prospect, the opening Lawns, the distant Views, must give way to a more healthy, a more temperate, or more convenient *Soil*.

I MIGHT here descend to shew you by what Methods you must proceed to distinguish a healthy Soil, such as by the Complexion of the Inhabitants, the Health of Cattle, and even by the Soundness of *Stones* and *Trees*, are known ; and in the choice of *Water*, concerning its Goodness, by being in running Streams, not stagnated, muddy, or leaving any Sediment in the Vessel, its Remoteness from Lakes or Ponds of Water, &c. But as this would divert your Thoughts from the Application of Buildings, to a proper Situation ; I shall refer it to another *Lecture*, or to *Alberti*, or *Andrea Palladio*, who has said what is necessary on this Subject, in his first and second Books of *Architecture*.

As Nature requires a Sameness, when Art is made use of to add Lustre to her Beauty ; so Art never more agreeably pleases us, than when she has a Resemblance of Nature : Therefore, by a kind of Sympathy and Attraction, when both  
are

## ARCHITECTURE. 67

are blended or mingled together, so as to be preserv'd without starting into Extreams, they must necessarily give that Pleasure to the Senses, which alone can flow from the nice Hand and Skill of the Designer.

IN this, I think, our Modern way of planning Gardens is far preferable to what was us'd 20 Years ago, where, in large Parterres, you might see Men, Birds, and Dogs, cut in Trees; or, perhaps, something like the Shape of a Man on Horseback—— (pardon this Digression.)—— In *Architecture* Men have fell into Methods equally absurd. In some Places, may be seen little Boys supporting a Burthen of a Monument that had been the Labour of 10 or 12 Persons to place there; or a *Corinthian* Column set in a Fish-pond, and a *Tuscan* at the Entrance of a Summer-house. I say such Inconsistencies in Nature always hurt the Imagination, and we view such Objects with more Pain and Surprize than any Pleasure they can possibly give us.

A CHAMPAIGN open Country, requires a noble and plain Building, which is always best supplied by the *Dorick* Order,

Order, or something analogous to its Simplicity. If it have a long extended View, it were best to range the Offices in a Line with the Building; for at distant Views it fills the Eye with a majestic Pleasure. A Situation near the Sea requires the same, or rather a Rusticity and Lowness: The Vapours of the Sea, by its saline Qualities, expand themselves some Distance, and always are a decaying Principle; and with the boisterous Winds which blow from it, must, consequently, require a Power forcible enough to withstand its corrosive Quality.

THE chearful Vale requires more Decoration and Dress; and if the View be long, or some adjacent River runs near it; the *Ionick* Order is the most proper; where Nature seems to *wanton* in Dress, and is gay in *Verdure*, she requireth Art to assist and embellish her, and the Liveliness of the *Ionick* Order can deck and garnish the Glebe. If the Spot be an Ascent, and some distant Hills or Wood environ the back Part, (in which I suppose the Front a South Aspect,) then a few Ornaments may be scatter'd in proper Parts, to give it an enlivening Variety;— but Care must be had not to  
use

use Superfluity. If it be on an Eminence, and surrounded with Woods, the principal Avenues should be spacious: *Portico's*, give a grateful Pleasure to us in the View, and more so, if the Front is not contracted by the Avenue, nor continue too near it, to take off the proper Shades and keeping of Design.

THE *Ionick* Order is of the three *Greek* Orders the most applicable to Situations of various Kinds; and if I say her Measures and Proportions more pleasingly attract the Eye, it is not without Reason: The Parts are analogous to Nature, in which she has been so nicely pois'd between the Rusticity of the *Dorick* and the Luxuriancy of the *Corinthian*, that I am more apt to believe the *Ionick* Order was invented as a Mean between the *Dorick* and the *Corinthian*, than that the *Ionick* was in so beautiful Proportion before the *Corinthian* Order was invented.

THE silent *Streams*, the gay, the wanton *Scene*, requires the *Corinthian* Order; where Nature is gilded with lively Landships, where the Verdure is blended with Flowers, which she decks herself with,  
and



and where the party-colour'd Painting of some opening Lawn garnishes her in all her Pride; then the *Architect* must have Recourse to Fancy, must mingle his Flowers with Nature, his Festoons of Fruits, &c. must deck the Fabrick, and be Nature in every thing but Lavishness; the same Chain of Similitude should run through the Design, rising from one Degree of Dress to another, still preserving the Consistency of the Parts with the Whole, and keeping that *Mediocrity* in Ornament which the Nature of the Design requires.

IF this proper Application of the *Orders* seem necessary in Seats for Retirement, I would beg leave to observe, that Cities and Towns require a just and nice Consistency in Things. The Prospect, it is true, cannot be had, but the Expences of erecting many irregular Buildings might be appropriated to better Taste and Fancy; publick Buildings in particular: A gay and lively Design of the *Corinthian* Order, is illy appropriated to an Hospital, and a Palace would be worse with the *Tuscan*.

A SPACIOUS

A SPACIOUS Square, or such an open Place as *Lincoln's-Inn-Fields*, might give room for Elegance and Design; but where a proper Distance is wanting to view a Building at, it makes an uncouth Figure. If you would see the Proportion of a Man, you must be so far distant as to take the whole of him in the Eye at once, and Buildings require the same Optical Rules.

**GREENWICH-HOSPITAL** has certainly a Nobleness and Grandeur in the Design; but I could wish that it stood a Mile from the River, or that it had been erected with the *Ionick* Order: And, I think, in this too, the Design is not justly appropriated, because two *Orders* finish the same Range, the *Corinthian* is next the River, and the *Doric* continueth through the Colonnade to the South Courts. I must say, *Tork-Stairs* have the justest Application of any thing I ever saw yet attempted, in relation to a proper Adaption of Design.

IF we retreat to a Rural Situation, *Hampton-Court* furnishes us with a proper Scene, and Sir *Christopher Wren*  
has

has justly appropriated his Decoration; not running into the Extreams of *Plainness* or *Luxuriance*. The same Propriety of Invention has attended that Design of Lord *Castlemain*, in which *Colen Campbell* was *Architect*. As that Situation has a Mixture of Openness and Gaity, he has blended Solidity and Airiness extremely agreeable.

*KENSINGTON-PALACE* affords a long Tract of Design, and the Invention of an *Architect* need not be rack'd to suit a Front analogous to the Situation: The Avenues are spacious, and afford all the Propriety and Delicacies of a *Corinthian* Profile, which is now sunk into the most irregular and disproportion'd Simplicity that has been anywhere perform'd.

THIS ill Application of Fancy in the Designer, has led many into unpardonable Errors; and that Situation of Sir *Gregory Page's*, was not worthy of so regular a Pile; the Glebe is unfertile, nor does any distant Prospect, worthy Notice invite the Eye, and the principal Front is to a barren Wild, where no Rivulet glides by, no Picturesque Landskip nor  
pleasing

## ARCHITECTURE. 73

pleasing Shades; every thing sinks into Lowness and an uncultivated Scene.

GENTLEMEN, This short Sketch of Situation and Choice of Design, will, I hope, give you a just Idea of what sort of Buildings are requir'd by various Scenes of Prospect; for the Designer is to adapt his Building to the Situation, it being, perhaps, impracticable to attain one suitable to his Design; and it often happens, such Impropriety makes a Modern Building look either like an old antiquated Castle, or else it dwindles into a luxuriant Folly.

BUT this proper Choice of Situation is not the only Care of an *Architect*; Proportion likewise requires our nicest Application to attain. To see on a considerable Eminence, the Length of a Front little, and the Height disproportion'd, would appear as absurd as to behold a Front in a Vale long and extended, and elevated only one Story. And this Choice must likewise be dependant upon Rules; for as the jarring of Instruments by blind Chance cannot possibly please the Ear, so the Disproportion of the Parts of any Object must naturally

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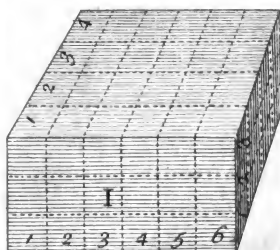
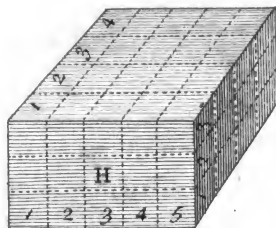
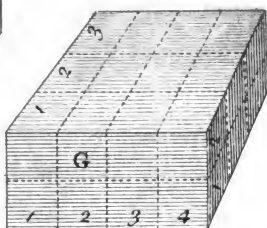
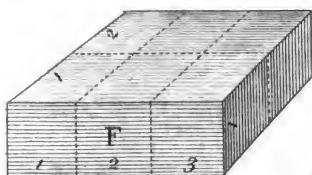
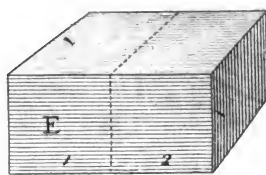
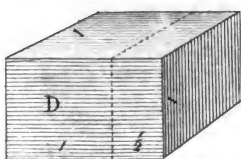
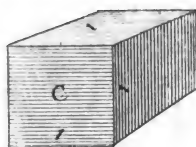
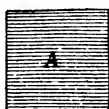
## 74 LECTURES on

naturally shock the Eye; and in both, unerring Rules must so proportion the Sounds, and dispose the Parts, that the whole may be compleat Harmony.

NATURE has taught Mankind in *Musick* certain Rules for Proportion of Sounds, so *Architecture* has its Rules dependant on those Proportions, or at least such Proportions which are Arithmetical Harmony; and those I take to be dependant on Nature. The Square in *Geometry*, the Unison or Circle in *Musick*, and the Cube in *Building*, have all an inseparable Proportion; the Parts being equal, and the Sides, and Angles, &c. give the Eye and Ear an agreeable Pleasure; from hence may likewise be deduc'd the Cube and half, the Double Cube; the Diapason, and Diapenté, being founded on the same Principles in *Musick*.

FROM hence may be consider'd likewise the Subduple Proportions of 2, 3, and 4, and their Duplicates, and 3, 4, and 5, likewise of 3, 4, and 6; all which I propose to explain, and apply their Uses to the external Part of Building; and it may be observ'd, that as these Proportions





Roberaus Morris inv. et delin.

Toms sculp.

## ARCHITECTURE. 75

portions have never been publish'd with regard to Building, I hope this Application of Numbers will be an agreeable Speculation for your future Enquiries.

BUT I am to observe, that even a Building of 1000 Foot long may have the same Proportions, by breaking forward for the Cube, and sinking to the Diapason, and changing the same Line to a Diapenté, which Mixture of proportion'd Parts will make the whole agreeable.

IF any of the following Proportions be to be perform'd, it must be observ'd, that the Cube should never exceed 50 Foot, the Cube and half never exceed 60 Foot Front, and the Double Cube never should be more than 80 Foot.

IF the Cube be 50 Foot Front consequently the Depth and Height will be the same. See Fig. C.

THE Cube and half, if the Front be 60 Foot, as Fig. D. the Depth will be 40, and Height 40.



THE Double Cube of 60 Foot Front, will be 30 Foot deep, and 30 Foot high: This, which is call'd a Double Cube in Building, is only the placing of two Cubes together in Plano; as may be seen by Fig. E.

THE Arithmetical Proportions flow in the same progressive Channel, and are to be made Use of as Necessity requires. 4. 3 and 2, with their Duplicates, make an agreeable Front. If the Front be 60 Feet, the Depth is 45, and Height 30; as is shewn Fig. G. by dividing it into 4, the Depth is 3, Height 2; or if it be 80 Foot Front, the Depth will by the same Rule be 60 Foot, and Height 40.

THE Arithmetical Proportion of 5, 4 and 3, if the Front be 60 Foot, the Depth will be 48 Feet, and the Height 36. See Fig. H. Or if the Front be 80 Foot, will produce 60 Foot deep, and 48 Foot high; divide the Front into 5 Parts, the Depth is 4, and Height 3.

THE Arithmetical Proportion of 6, 4 and 3, will, if the Front be 60 Foot, produce

## ARCHITECTURE. 77

produce the Depth 40, and Height 30 Foot; as the Fig. I. Or if the Front be 90 Foot, the Depth will be 60, and Height 45.

I SHOULD now proceed to shew the Uses of them, in their Application to Situations and Orders; but as I have, perhaps, already intruded on your Patience, must beg leave to make it the Subject of my next Lecture; and am in the mean time,

Gentlemen,

*Your most Humble Servant.*

Read to the Society, Jan. 21, 173 $\frac{3}{4}$ .

A Ta]

A Table of HARMONICK and ARITH-  
Rooms and Chimnies by

| Rooms.  |          |         |                    | Chimnies.          |                    |                   |               |
|---------|----------|---------|--------------------|--------------------|--------------------|-------------------|---------------|
| Length. | Breadth. | Height. | Breadth.           | Height.            | Depth.             | Square of Funnel. |               |
| 12      | 12       | 12      | 3 0                | 3 0                | 1 6                | 1 1               | $\frac{1}{2}$ |
| 14      | 14       | 14      | 3 3                | 3 3 1              | 7 $\frac{1}{2}$    | 1 2               | $\frac{3}{4}$ |
| 16      | 16       | 16      | 3 5 $\frac{1}{2}$  | 3 5 $\frac{1}{2}$  | 1 8 $\frac{1}{4}$  | 1 3               | $\frac{1}{2}$ |
| 18      | 18       | 18      | 3 8                | 3 8                | 1 10               | 1 4               | $\frac{1}{4}$ |
| 20      | 20       | 20      | 3 10 $\frac{1}{2}$ | 3 10 $\frac{1}{2}$ | 1 11 $\frac{1}{2}$ | 1 5               | $\frac{1}{4}$ |
| 22      | 22       | 22      | 4 1                | 4 1                | 2 0 $\frac{1}{2}$  | 1 6               | $\frac{1}{4}$ |
| 18      | 12       | 12      | 3 3                | 2 8 $\frac{1}{2}$  | 1 5 $\frac{1}{4}$  | 1 1               | $\frac{1}{2}$ |
| 21      | 14       | 14      | 3 6                | 2 11 $\frac{1}{2}$ | 1 7 $\frac{1}{2}$  | 1 2               | $\frac{1}{4}$ |
| 24      | 16       | 16      | 3 9                | 3 2                | 1 8 $\frac{1}{4}$  | 1 3               | $\frac{1}{4}$ |
| 27      | 18       | 18      | 3 11 $\frac{1}{2}$ | 3 4 $\frac{1}{2}$  | 1 9 $\frac{1}{4}$  | 1 4               | $\frac{1}{2}$ |
| 30      | 20       | 20      | 4 2 $\frac{1}{2}$  | 3 6                | 1 11               | 1 5               | $\frac{1}{4}$ |
| 33      | 22       | 22      | 4 5                | 3 8                | 2 0 $\frac{1}{4}$  | 1 6               | $\frac{1}{4}$ |
| 24      | 12       | 12      | 3 5 $\frac{1}{2}$  | 3 0                | 1 7 $\frac{1}{2}$  | 1 2               | $\frac{1}{2}$ |
| 28      | 14       | 14      | 3 9                | 3 3                | 1 8                | 1 3               | $\frac{1}{4}$ |
| 32      | 16       | 16      | 4 0                | 3 5 $\frac{1}{2}$  | 1 10 $\frac{1}{2}$ | 1 4               | $\frac{1}{8}$ |
| 36      | 18       | 18      | 4 3                | 3 8                | 1 11 $\frac{1}{4}$ | 1 6               | $\frac{1}{8}$ |
| 40      | 20       | 20      | 4 5 $\frac{1}{2}$  | 3 10 $\frac{1}{2}$ | 2 1                | 1 6               | $\frac{1}{2}$ |
| 44      | 22       | 22      | 4 8                | 4 1                | 2 3                | 1 8               |               |
| 24      | 18       | 12      | 3 8                | 3 0                | 1 8                | 1 3               |               |
| 28      | 21       | 14      | 4 0                | 3 3                | 1 9 $\frac{1}{2}$  | 1 4               |               |
| 32      | 24       | 16      | 4 3                | 3 5 $\frac{1}{2}$  | 1 11               | 1 5               |               |
| 36      | 27       | 18      | 4 6                | 3 8                | 2 0 $\frac{1}{2}$  | 1 6               |               |
| 40      | 30       | 20      | 4 8 $\frac{1}{2}$  | 3 10 $\frac{1}{2}$ | 2 1 $\frac{1}{4}$  | 1 7 $\frac{1}{4}$ |               |
| 44      | 33       | 22      | 4 11 $\frac{1}{2}$ | 4 1                | 2 3                | 1 8               |               |

## The Use of the Table.

Let the given Height of the Room be 12 Foot to the  
of the Room 12 Foot, the Length 18, in the same Line  
2 Foot 8  $\frac{1}{2}$  Height, 1 5  $\frac{1}{2}$  the Depth of the Chimney,  
so of the Proportion of any Chimney to the given Mag-

# ARCHITECTURE. 79

## METICAL Proportions, for Magnitudes of UNIVERSAL Rules.

Rooms.

Chimnies.

|                        | Rooms.  |          |         | Chimnies.          |                    |                    | Square of Funnel.  |
|------------------------|---------|----------|---------|--------------------|--------------------|--------------------|--------------------|
|                        | Length. | Breadth. | Height. | Breadth.           | Height.            | Depth.             |                    |
| Proportion. 6, 4, 3, 5 | 20      | 16       | 12      | 3 5 $\frac{1}{2}$  | 2 10 $\frac{1}{2}$ | 1 7                | 1 2                |
|                        | 25      | 20       | 15      | 3 10 $\frac{1}{2}$ | 3 2 $\frac{1}{2}$  | 1 9                | 1 3                |
|                        | 30      | 24       | 18      | 4 3                | 3 5 $\frac{1}{2}$  | 1 11 $\frac{1}{2}$ | 1 5                |
|                        | 35      | 28       | 21      | 4 7 $\frac{1}{2}$  | 3 9                | 2 1 $\frac{1}{2}$  | 1 6                |
|                        | 40      | 32       | 24      | 4 11               | 4 0                | 2 3                | 1 8                |
| Proportion. 6, 4, 3, 6 | 45      | 36       | 27      | 5 2 $\frac{1}{2}$  | 4 3                | 2 4 $\frac{1}{2}$  | 1 9 $\frac{1}{2}$  |
|                        | 24      | 16       | 12      | 3 7                | 3 0                | 1 7 $\frac{1}{4}$  | 1 1                |
|                        | 30      | 20       | 15      | 4 0 $\frac{1}{2}$  | 3 4 $\frac{1}{2}$  | 1 10               | 1 4 $\frac{1}{4}$  |
|                        | 36      | 24       | 18      | 4 5                | 3 8                | 2 0 $\frac{1}{4}$  | 1 6                |
|                        | 42      | 28       | 21      | 4 9 $\frac{1}{2}$  | 3 11 $\frac{1}{2}$ | 2 2 $\frac{1}{4}$  | 1 7 $\frac{1}{2}$  |
| Proportion. 6, 5, 4, 7 | 48      | 32       | 24      | 5 1                | 4 2 $\frac{1}{2}$  | 2 3 $\frac{1}{4}$  | 1 9                |
|                        | 54      | 36       | 27      | 5 5                | 4 6                | 2 6                | 1 10               |
|                        | 18      | 15       | 12      | 3 5                | 2 11 $\frac{1}{2}$ | 1 7 $\frac{1}{8}$  | 1 1 $\frac{1}{4}$  |
|                        | 24      | 20       | 16      | 3 9 $\frac{1}{2}$  | 3 4                | 1 9 $\frac{1}{8}$  | 1 3 $\frac{1}{4}$  |
|                        | 30      | 25       | 20      | 4 4                | 3 8                | 2 0                | 1 6                |
| Examples. 6, 5, 4, 7   | 36      | 30       | 24      | 4 9                | 4 0 $\frac{1}{2}$  | 2 2 $\frac{1}{2}$  | 1 7 $\frac{1}{2}$  |
|                        | 42      | 35       | 28      | 5 3                | 4 4 $\frac{1}{4}$  | 2 5                | 1 9                |
|                        | 48      | 40       | 32      | 5 6                | 4 8 $\frac{1}{4}$  | 2 6 $\frac{1}{2}$  | 1 10 $\frac{1}{4}$ |
|                        | 12      | 12       | 12      | 3 0                | 3 0                | 1 8                | 1 1 $\frac{1}{2}$  |
|                        | 18      | 12       | 12      | 3 3                | 2 8 $\frac{1}{2}$  | 1 5 $\frac{1}{4}$  | 1 1 $\frac{1}{2}$  |
| Examples. 7            | 24      | 12       | 12      | 3 5 $\frac{1}{2}$  | 3 0                | 1 7 $\frac{1}{2}$  | 1 2 $\frac{1}{2}$  |
|                        | 24      | 18       | 12      | 3 8                | 3 0                | 1 8                | 1 3                |
|                        | 20      | 16       | 12      | 3 5 $\frac{1}{2}$  | 2 10 $\frac{1}{2}$ | 1 7                | 1 2 $\frac{1}{2}$  |
|                        | 24      | 16       | 12      | 3 7                | 3 0                | 1 7 $\frac{1}{4}$  | 1 1                |
|                        | 20      | 15       | 12      | 3 5                | 2 11 $\frac{1}{2}$ | 1 7 $\frac{1}{8}$  | 1 1 $\frac{1}{4}$  |

Cube and  $\frac{1}{2}$ , the 2d Proportion; you will find the Breadth is the Proportion of the Chimney 3 Foot, 3 the Breadth, and 1 1  $\frac{1}{2}$  the Side of the Square of the Funnel: And nitude by the preceding Rules.

LECTURE



## LECTURE VI.



IN my last *Lecture* I describ'd the Beauties of a Rural Situation, and a proper Choice of the *Orders* to be erected in such Situations; adapting them in their Decoration and Dress similar to the Beauties such retir'd Villa's require; pointing out likewise, where Nature seem'd to wanton in Luxuriancy, how to blend Art so agreeably with her, to give a Pleasure to the Eye of the Beholder; and compleating the same with certain unerring Proportions to be made use of in Buildings of various Magnitudes, so as to render those Proportions useful by universal Rules.

IN Descriptions of this kind, *Gentlemen*, it will be almost impossible to explain every Term in Art, or make my self so intelligible, as by an ocular View of the Designs themselves: I must therefore

## ARCHITECTURE. 81

fore content myself with making only such Remarks as are useful, in forming a just Idea of the general or particular Extent of *Architecture*, as it relates to Beauty and Convenience; in which I shall so endeavour to explain myself, as to give you all the Satisfaction that can be expected from a bare Description, in which Words only can convey the Object to your Minds.

BEAUTY, in all Objects, spring from the same unerring Law in Nature, which, in *Architecture*, I would call Proportion. The joint Union and Concordance of the Parts, in an exact Symmetry, forms the whole a compleat Harmony, which admits of no Medium; it is agreeably blended through the whole, and diffuses itself to the Imagination by some sympathising Secret to the Soul, which is all Union, all Harmony, and Proportion.

CONVENIENCE is the just supplying of Wants; it is the Handmaid to Nature, assisting us to what is necessary in Life; without being incommoded by it, we receive our Meat in due Season, our Sleep without Disturbance; our Ease,  
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our Pleasure, is centred in Convenience. Our Choice of Situation may delight the Eye, but I observ'd in my last *Lecture*, that Beauty, or what I now call Proportion, must give way to this more important one, Convenience. With these two the *Architect* is to endeavour to become not only acquainted, but likewise Master of, before he attempts to launch into the Field of Designing: But when those are attain'd, all the Difficulties in *Architecture* vanish, and he can delineate his Ideas from the Cottage to the Palace, so as to render them worthy of the noblest Encouragement and Imitation.

THERE is this great Disadvantage arises in Buildings which are, or are to be erected in Cities or Towns, that neither Proportion or Convenience can be had. The Irregularity or Littleness of the Spot, prevent the *Architect* from shewing his Skill in Designing: But it is to be observ'd, that even that Irregularity or Smallness requires his Judgment to dispose of in the most advantageous Manner; and sometimes Nobleness it self may be seen in Miniature, when delineated by a skilful Hand. But, perhaps,

haps, the same Spot, design'd by another, would appear disproportion'd and inconvenient. When I speak of Designs in general, I would not be understood to mean those little Buildings for Shops, or small Tenements; but those of a higher Class, whose Inhabitants may be such to whom Fortune has been propitious enough to make happy under her Protection; though sometimes those of a lower Degree require the Direction of the *Architect* and his Skill to perform.

IN Towns and Cities, where Trading, and Business of other Natures, require the Attendance of Persons of superior Rank; various Parts of it are wanted for their Convenience: The Merchant requires the City for his Residence; Pleasure here gives way for Business, and Proportion is set aside for Convenience of Warehouses for Stowage of Goods and Merchandize, which are the Produce of various Countries; the Wine-Merchant for Cellars; the Cotton-Merchant for dryer Store-Rooms, &c. in all which the *Architect* is to be acquainted with Convenience.

ON the other Hand, the Courtier resides in the more retir'd Parts of the



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Town, where Spaciousness and Grandeur are the Object of the Designer : Here, indeed, he finds generally the most Regularity in his Spot of Ground, and more Space for his Fancy to move in : But as their Residence in Town is only a small Part of the Year, and where the Grandeur and Magnificence equal to their Quality, is not so much requir'd as in their Country Seats, such Noblemens Houses are to be consider'd only as an Accommodation for themselves during a short Attendance on Court or Parliament ; like the Merchant's House, the *Architect* is only to consider the Convenience, suitable to the Dignity of the Person, as far as the Spot will admit, reserving such Apartments for Grandeur as may be least liable to be incommoded.

FROM what I have said of Proportion and Convenience, as they relate to Town Houses, there is one unfortunate Exception to both, in which, even by the Report of all Travellers, *Rome* itself might have been out-done, both in Magnificence and Proportion, in Delicacy and Convenience : Space is not wanting, an excellent Foundation, the most healthy Part of this Noble City, and the Verge of  
of

of Retirement to the Country, near the Court, the Center of Business, supplied by Water, and all other Provisions, even to Profuseness; and yet that nice Application of *Design* is wanting. There is a Field for Fancy, the World cannot shew a Spot of Ground built on so Noble, and so capable of producing four magnificent regular Sides: If every Builder had agreed as to the external Part, to have made each Range as regular as the East Side, or with that Grandeur of Esqr; *Shepherd's* on the North, I may affirm, future Ages might boast, that the greatest and most regular Buildings on one Spot of Ground, was erected near the City of *London*, call'd *Grosvenor-Square*.

LET us now retreat into the Country, and view the Advantages of a Rural Situation, where no Impediments lie in the way to Proportion and Convenience, in which the Care and Skill of the *Architect* is under no Restraint; where there is room for Dress and Decoration, for Grandeur and Usefulness, appropriating the Design to Purposes requir'd by the Person who is to be the Inhabitant. A Gentleman who delights in mixing Profit with his Pleasures, by keeping some Part  
of

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of his Estate in his own Hands, and making the most Advantage of the Produce of his Ground, the Center of it is the most proper; for then, by a moderate Fatigue, he may view the whole himself whenever he thinks fit, and make Improvements round about it; but if possible it can be built near a River, it will be vastly advantageous, and greatly conduce to its Beauty and Convenience, for by that Means, Carriage of Things in the Produce of the Estate is render'd less expensive, the Prospect will be more agreeable, it will refresh the Air, and serve the Purposes of the House, and, if requir'd, in the watering the Meadows, or Pasture Land, Gardens, &c. in all which Convenience must have the Preheminence.

If the Situation cannot be had near some navigable River, at least, if possible, near some Brook or running Water, and as distant from dead and stagnant Waters as conveniently can be, because those impregnate the grossest and most unwholesome Air, which by building in elevated or more open Places, may be avoided; for where the Air is free, and in a perpetual Motion, and the Earth, through its Declivity,

Declivity, purg'd from Damps and Vapours, it generally renders the Inhabitants healthful, gay, and very well complexion'd; but due Care ought to be had that the House be situated near such Water that has no particular or offensive Taste, that it be clear and light, its Bed on Sand or Gravel, without Mud or Slime to create a Sediment.

THERE is one principal Objection to Situation in general, which is carefully to be observ'd, that is, not to build in Vallies that are enclos'd by Mountains or Hills; because Houses which lie conceal'd in such Obscurity, besides the Disadvantage of their being depriv'd of Prospect, are prejudicial to Health; the Earth being impregnated with Rains which settle there, will send forth contagious Vapours, and the Provisions carried into such Magazines and Granaries, are corrupted with Moisture; if, on the other hand, the Sun can penetrate into those Vallies, the Reflexion of its Rays will create excessive Heats; if not, then a perpetual Shade will render the Inhabitants dull and indolent; when the Winds blow into them, they are keen and boisterous, because of the narrow Passage through

through which they must pass, and when they cease to blow there, the Air will become gross and sickly through its Stagnation. These Cautions observ'd, I shall now pass to Remarks on Seats built only for Pleasure or Retirement, where the command of an ample Fortune puts the Inhabitant above the Fatigues attendant on Rural Employment, in which they partake the Pleasure without mixing with it the Labour.

NOBLEMENS Seats, besides Grandeur, are erected for a Retirement, or as a Retreat from Publick Cares, perhaps in some silent unfrequented Glade, where Nature seems to be lull'd into a kind of pleasing Repose, and conspires to soften Mankind into solid and awful Contemplations, especially a curious and speculative Genius, who in such distant and remote Recesses, are free from the Noise and Interruptions of Visitors or Business, or the Tumult of the Populace, which are continually diverting the Ideas into different Channels: Here Proportion, Regularity, and Convenience, are to be aim'd at in the Performance of the Fabrick, which should be erected with the utmost Symmetry and Exactness.

THE

THE first Care in respect to Decoration, is the justly appropriating the Design to the Situation, pursuant to the Rules I laid down in my last *Lecture*, so blending Art and Nature together as to render it convenient. As these Seats are most used in the warmest Seasons of the Year, Shade is chiefly wanted; and *VISTA's* through the Design each Way, besides the Pleasures of some distant Prospect, are Inlets to the refreshing Breezes, which enliven the Spirits, and, by cooling the Rooms, make the Seasons more agreeable: The Entrances should be Grand, the Rooms Noble and Spacious, and should be contiguous to each other, without the Interruption of Passages or Stair-cases, which should be so plac'd, that each Room might have a Communication to them without incommoding another.

THE South Aspect is most preferable for the principal Front, if it can be conveniently had, in which should be the Rooms of State and Grandeur. The East is the most proper for a Library; because the Morning Sun gives an enlivening Warmth to Nature, and then the Spirits

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are more open, more active and free in the Choice of beautiful Ideas, to furnish the Fancy of those whose Genius leads them to the Study of the Curiosities of Art or Nature.

THE principal Floor should be elevated above the Level of the Ground at least two Foot, because it gives you the more extended Prospect, by being rais'd above Objects which may be an Impediment in the View; it likewise is more advantageous in having proper Lights to the lower Offices; in Nobleness of Aspect: In short, the Magnificence of a Building is dependant on the elevating it so far above the Eye, as to invite the Beholder to consider the taking in of the whole Scene at one View, where Distance can be had; and which should be at such an Angle that the whole may be seen without moving the Eye, which is by making the Point of Distance from the Center of the Building equal to half the Length and Height of the Building added together. Supposing a Front 100 Foot and the Height 40, those added together, half that Length, which is 70 Foot, is the proper Point of Sight where to view the whole Fabrick distinctly, without breaking through

through the Rules of Opticks, in lofty Buildings.

**I**N low Buildings which are of an extended Length, another Point of Distance may be used, which is by making the Distance or Point of Sight from the House equal to the Length of the Front; that is, if the Building be low and 100 Foot Front, the Point of Distance will be 100 Foot: And some Mathematicians have to this prefer'd another Rule, which is by making the Point of Distance an Equiangled Triangle; that is, if the Front be 100 Foot, the Point of Distance shall be 100 Foot from the Extremity of the Building, and not from the Center, as is propos'd in the preceding Method.

**I**N Hunting-Seats, which are proper for an open Champaign Country, one Story in Height is sufficient; for as the Seasons for Hunting are in that Part of the Year which is generally cold, and require a temperate Warmth, to keep equal to that created by the Exercise; it must be the Care of the *Architect* to preserve the Lodgings as warm as can be, by making as few Doors and Windows into those Rooms as Conveniency will



permit, for as they are so many Inlets of Air, they must consequently render the Rooms more Cold, and uncomfortable for Lodging. All Winter Houses should be so contriv'd, while those for the Summer should be more open, to cool and make the Dwellings pleasant and agreeable.

If the Soil be dry, and the principal Floor be level with a beautiful Garden on a Terras, with some remarkable Prospect, it were best to place the lower Offices in a Fosse, in which these Advantages will arise; an easy Access to the Apartments, and Pleasure of Retirement into the Garden, without being overlook'd by Servants from the lower Offices; and by the Fosse a clear open Air is communicated to the Offices, and a Light equal to that of the principal Floor, and this Convenience, that all the Ground (which in other Buildings not so plac'd) that lieth against the lower Part, and continually damps and renders it unhealthy, is this way remov'd, and the lower Offices become dry enough for Lodgings, if requir'd. As to the Distribution of the Apartments of the lower Offices, they are always to be consider'd with the  
Wants

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Wants and Conveniencies requir'd by the Difference of Families, Fortune, or Uses; where the *Architect* is to consult the general Design of the Building, and so adapt his Proportion and Convenience. In the principal Apartment, Proportion is to be chiefly consider'd, and join'd with Convenience; where I am to observe such Proportions as are to be perform'd by Rules. As in my last *Lecture* I propos'd Proportions for Buildings themselves, as to the Magnitude of the external Part, by the same Proportions I intend now to describe the internal Apartments, so that each Room may bear an Analogy and Connexion to each other; and if in some Places I am constrain'd to fall in with the Opinion of others, in this Part I have Recourse only to my own Fancy: I love to strike out of a beaten Path sometimes, only to walk the more easy, or at least to prevent Disturbance from the busy Multitude; and then I have more Room for the Imagination to work upon, and, perhaps, not a little Pleasure in communicating my Sentiments to Friends without endangering their Censure.

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As I consider the Affinity between *Architecture* and *Musick*, so I have produc'd these Proportions from the same Rules. In *Musick* are only seven distinct Notes, in *Architecture* likewise are only seven distinct Proportions, which produce all the different Buildings in the Universe, *viz.*

THE Cube, — the Cube and half, — the Double Cube, — the Duplicates of 3, 2, and 1, — of 4, 3, and 2, — of 5, 4, and 3, — and of 6, 4, and 3, produce all the Harmonick Proportions of Rooms.

Let me, for Example, propose a Building whose principal Floor is 12 Foot high, how to proportion those Rooms which are to be in the internal Part by the preceding Rules.

If

# ARCHITECTURE.

|  |       |   |                      |                    |       |                    |       |
|--|-------|---|----------------------|--------------------|-------|--------------------|-------|
| If the Height be 12<br>If the Height be 12<br>If the Height be 12  | Foot. | { | the Cube will be     | 12 Long, 12 Broad. | Foot. | 12 Long, 12 Broad. | Foot. |
|  |       |   |                      |                    |       |                    |       |
|  |       |   |                      |                    |       |                    |       |
|  |       |   |                      |                    |       |                    |       |
| The Duplicate of 3.<br>The Duplicate of 4.<br>The Duplicate of 5.<br>The Duplicate of 6.   | Foot. | { | the Cube and half is | 18 Long, 12 Broad. | Foot. | 24 Long, 12 Broad. | Foot. |
|  |       |   |                      |                    |       |                    |       |
|  |       |   |                      |                    |       |                    |       |
|  |       |   |                      |                    |       |                    |       |
| The Duplicate of 3. 2 and 1, if the Height is 12, Length 36, Breadth 24.<br>The Duplicate of 4. 3 and 2, if the Height is 12, Length 24, Breadth 18.<br>The Duplicate of 5. 4 and 3, if the Height is 12, Length 20, Breadth 16.<br>The Duplicate of 6. 4 and 3, if the Height is 12, Length 24, Breadth 16. | Foot. | { | the Double Cube      | 24 Long, 12 Broad. | Foot. | 24 Long, 12 Broad. | Foot. |
|  |       |   |                      |                    |       |                    |       |
|  |       |   |                      |                    |       |                    |       |
|  |       |   |                      |                    |       |                    |       |

THESE are the seven Proportions of Rooms, which are founded upon the same Rules as the Union, the Diapenté, the Diapason, the Sefquialter, &c. are in *Musick*, and may be varied to all kinds of Magnitudes whatever, fupposing your Story to be the Standard.

I SHALL

I SHALL only illustrate this Rule by one Example more, by supposing,

Foot. Foot.

The Height of the Story 18 Foot, { the Cube will be in Length 18, Breadth 18. the Cube and half in Length 27, Breadth 18. the Double Cube in Length 36, Breadth 18.

The Subduple { of 4. 3 and 2, — Length 36, Breadth 27. of 5. 4 and 3, — Length 30, Breadth 24. of 6. 4 and 3, — Length 36, Breadth 24. of 3. 2 and 1, — Length 54, Breadth 36½.

*The Rule Explained.*

Suppose the Height 18 Foot, and the Subduple Proportion is 6, 4, and 3, divide 18 by 3, and the Quotient is 6, multiply that Quotient by 4, produceth 24, the Breadth, and multiplying it by 6, produceth 36, the Length of the Room: And so of all the other Proportions.

THIS

THIS singular way of Thinking, led me to another new Thought, in proportioning the Magnitude of the Opening of Chimnies to those Rooms by an universal Rule, which will likewise serve for all Manner of Rooms whatever. By these Rules the Breadth of the Chimney, its Height, Depth, and Square of the Funnel for Conveyance of Smoke, are demonstrated, and in so easy a Manner, that none of you can mistake their Application and Use.

**RULE I.** To find the Height of the Opening of the Chimney from any given Magnitude of a Room, add the Length and Height of the Room together, and extract the Square Root of that Sum, and half that Root will be the Height of the Chimney.

**RULE II.** To find the Breadth of a Chimney from any given Magnitude of a Room, add the Length, Breadth and Height of the Room together, and extract the Square Root of that Sum, and half that Root will be the Height of your Chimney.

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RULE

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**RULE III.** To find the Depth of a Chimney from any given Magnitude, including the Breadth and Height of the same, add the Breadth and Height of the Chimney together, take one fourth of that Sum, and it is the Depth of the Chimney.

**RULE IV.** To find the Side of the Square of a Funnel proportion'd to clear the Smoke, from any given Depth of the Chimney, take three fourths of the given Depth, and that Sum is the Side of the Square of the Funnel.— Observe only, that in Cube Rooms the Height is equal to the Breadth, and the foregoing Rules are universal.

To prove the Rule universally useful, I have a Table of all the foregoing Proportions calculated in the preceding Manner, from which I shall shew you an Example of the Proportions of the same, as is before describ'd, and in the following Manner.

If

Chimnies.

|                          | Foot. | Length.        | Bread. | Br.                | Heig.              | Dep.              | Squ.               |
|--------------------------|-------|----------------|--------|--------------------|--------------------|-------------------|--------------------|
| If the Room be in Height | 12,   | 12, and        | 12,    | 3 0                | 3 0                | 1 6               | 1 11               |
| The Cube and half        | 12,   | 18,            | 12,    | 3 3                | 2 8 $\frac{1}{2}$  | 1 5 $\frac{3}{4}$ | 1 11 $\frac{1}{2}$ |
| The Double Cube          | 12,   | 44,            | 12,    | 3 11 $\frac{1}{2}$ | 2 9                | 1 7 $\frac{1}{2}$ | 1 21 $\frac{1}{2}$ |
| The Sub-<br>druple       | {     | of 4, 3 and 2, | 12,    | 3 8                | 3 0                | 1 8               | 1 3                |
|                          |       | of 5, 4 and 3, | 12,    | 3 5 $\frac{1}{2}$  | 2 10 $\frac{1}{2}$ | 1 7               | 1 2 $\frac{1}{2}$  |
|                          |       | of 6, 4 and 3, | 12,    | 3 7                | 3 0                | 1 7 $\frac{3}{4}$ | 1 1                |
|                          |       | of 3, 2 and 1, | 6,     |                    |                    |                   |                    |



## 100 LECTURES ON A

THUS, Gentlemen, I have not omitted any Observation that might prove useful to you, especially in the strict Adherence to Proportions, perform'd by Rules. My next *Lecture* will contain some useful Observations on *Light* sufficient to illuminate Rooms of any Magnitude, by an infallible Method; and some general Reflections, which will prove of singular Use to you, if observ'd, in the Performance of any Branch of *Architecture*.

GIVE me Leave, in the mean time, to assure you I am with due Respect,

*Yours, &c.*



LECTURE



## LECTURE VII.

GENTLEMEN,



Y fifth and sixth *Lectures* consisted chiefly of the general Proportions which are requir'd to be made use of in the external and internal Parts of Building: When I consider Proportions, their Efficacy and Use, I am led into a Profundity of Thought; each Part of the Creation, consider'd distinctly, or the amazing Structure of the Whole, or the Animal and Vegetable World, fills us with noble Ideas of the Power which such Proportions have on the Mind; I mean those that are made conformable to the unerring Laws of Nature.

If we immerse our Ideas into the infinite Tract of unbounded Space, and with the Imagination paint out the numberless Multitudes of Planets, or little Worlds,

## 102 LECTURE 8

Worlds, regularly revolving round their destin'd Orbs; if we consider with what wondrous Skill and Exactness they perform their Revolutions, and how harmoniously they are whirl'd by their Eccentric and Contentrick Motions, into their proper Tracts of Revolution; if we imagine the exact Proportion, Distance, or Use of every one of them, we must feel Emanations of the Harmony of Nature diffus'd in us; and must immediately acknowledge the Necessity of Proportion in the Preservation of the whole Oeconomy of the Universe. Were the Planets to move irregularly, without stated Laws or Order, all things would soon jumble together into original Chaos.

If we sink lower into the Animal Creation, we shall find the same Proportions and Order preserv'd through the whole Race of Beings; and even the Vegetative Tribe, in their several Classes; spring from the same uniform and exact Rules; and their Proportions insensibly strike the Imagination by some sympathizing Secret, which, perhaps, Futurity only can unravel.

Man, the noblest of all Creatures, is the only one who is capable of Reason, and of reflecting on his own Existence, and of contemplating the Works of God.

Men, from the repeated Instances of Order in Nature, and subodily, first found the Necessity of performing every thing by stated Rules; there being the greater Certainty of the Exactness of their Performance, than if blind Chance were to direct them to the Choice of those Proportions: From hence the Study of Arts and Sciences necessarily sprung; more particularly, those Branches which are dependant on the *Mathematicks*, such as *Musick*, *Sculpture*, *Painting*, *Architecture*, and the like; all being dependant on such Rules and Proportions which are the Dictates of Nature, and infallibly please the Imagination; especially in *Architecture*, the Ancients so beautifully perform'd their Works they always gave a Pleasure to the Beholder.

THESE Observations will be useful to you in the Choice of Designs, or in the Directions of the Performance of them: First, that the internal Parts may be proportion'd to the external; that is, a small Building should have little Rooms; in a larger, the Rooms must be more spacious, having an Analogy to the Magnitude of the Fabrick; and their Heights must have

have a Proportion, regulated by some of the preceding Rules. *Palladio* has observ'd, that there are seven beautiful Proportions, and has likewise pointed them out, *viz.* A Circle; or a Square; or the Diagonal of a Square; or a Square and one third, or a Square and half, a Square and two thirds, or lastly, two Squares; and has given a Section of each of those Proportions, which, though different from the Rules I have laid down, are agreeing in the Number Seven; and that the Length of no Room exceed a Double Cube; or what he there terms two Squares; and, with one Observation worthy your Notice, that the nearer a Room (in particular a Hall) is to a Square, the more uniform and commodious they will be: Though he, perhaps, conceals the Reason why such Proportions affect the Eye and Imagination, which are only because they are such which Nature herself dictates, Unison being always Harmony.

It will be necessary in Country Seats, to have each Side of the Entrance or Middle of the Building alike; not only to preserve a Harmony in the several Parts, but as the Walls are answerable  
to

## ARCHITECTURE. 105

to each other, they will be equally press'd by the Roof; and if the Building is so dispos'd, that more Walls are on one Side than the other, or of different Magnitudes, then the Roof pressing, or being not so easily supported by the weakest Side, there will be Gaps and Chasms, occasion'd by greater Settlements, which will render the Building unfirm and inconvenient.

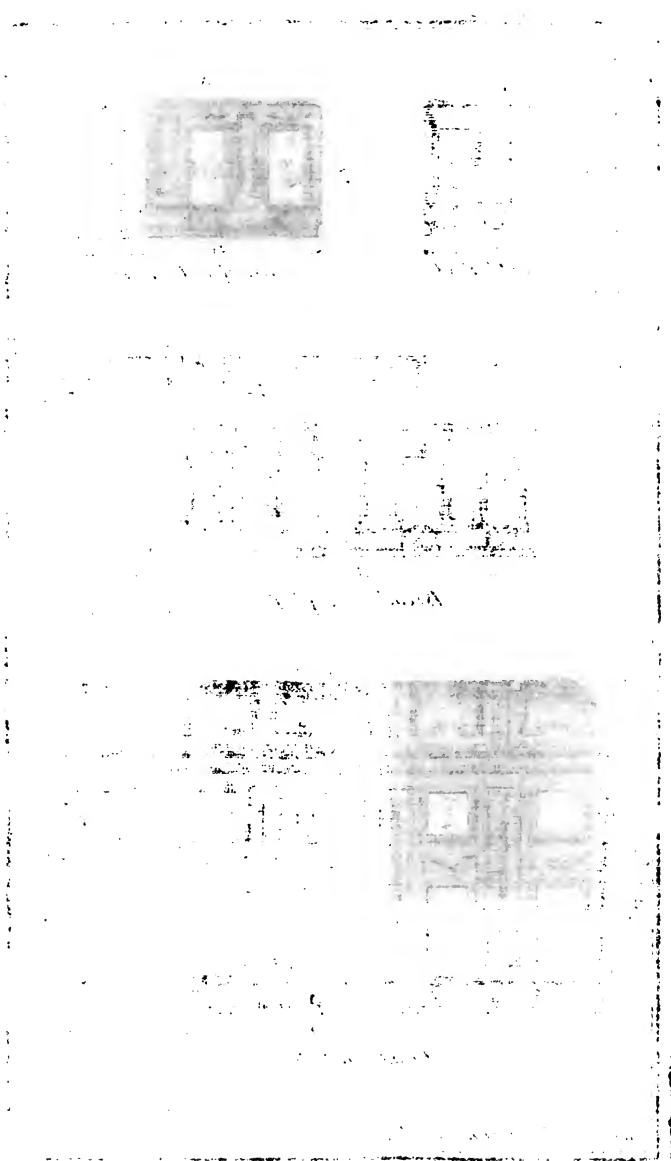
IN each Room likewise the Piers on one Side should answer, and be equal to the other Side of the Middle of it, those on one Side the Chimney should be the same Magnitude as those on the other, and on the Window Side the same Uniformity should be observ'd; the Doors should answer one another, either by real or false; and a Vista through the Middle of the Building should be always had, and, if possible, to each Front; and the Doors of one Room, in a Range of Rooms, should be dispos'd to answer each other in a Line, to preserve a Grandeur proportion'd to the Magnitude of the Building.

IN a spacious Building, as some principal Rooms will be wanting, smaller  
P will

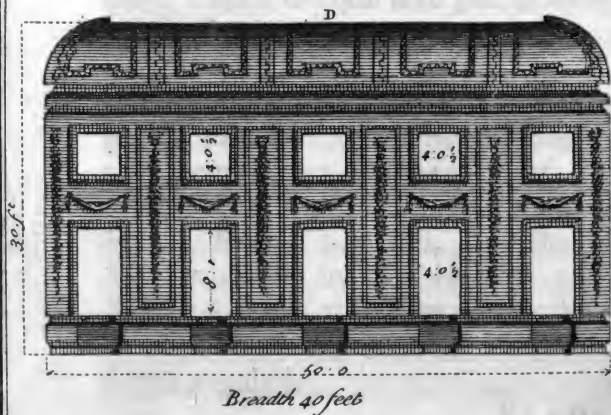
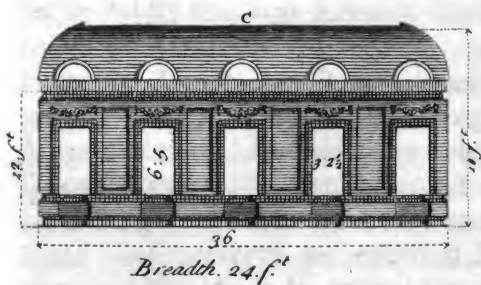
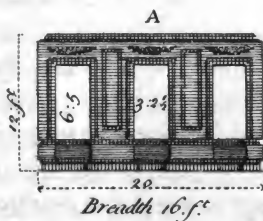
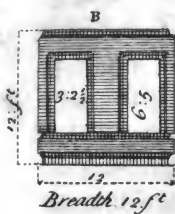
will doubtless occur; but these must lie contiguous to each other, not interrupting the State and Magnificence of the others; and by making Mezonina's or half Stories, will render those little Rooms of an elegant Proportion, which by placing near the Back-Stairs, or more convenient Passage, become Lodging-Rooms, which are much warmer than those stately spacious Rooms, having less Inlets of Air, and are sooner heated by Fewel. There are Rules likewise for proportioning of Light, according to the Magnitude of the Room, by which any Room may be illuminated more or less, according to the Uses of them, and at the same time preserve an external Regularity; which, as it is on an uncommon Basis, I shall explain it to you as well as I conveniently can.

LET the Magnitude of the Room be given, and one of those Proportions I have propos'd to be made use of, or any other; multiply the Length and Breadth of the Room together, and that Product multiply by the Height, and the Square Root of that Sum will be the Area or superficial Content in Feet, &c. of Light requir'd.

EXAMPLE.







Robertus Morris inv. et delin.

Tomus sculp.

**EXAMPLE.** Suppose a Room (mark'd A.) whose Magnitude is the Arithmetical Proportion of 5, 4, and 3, and is 20 Foot long, 16 Foot broad, and 12 Foot high, the Cube or Product of its Length, Breadth, and Height, multiplied together, is 3840, the Square Root of which Sum is 62 Foot, if the Height of the Story is 12 Foot, as is before mention'd, divide that 62 Foot into three Windows, each Window will contain 20 Foot 8 Inches of superficial Light, and those will be found to be 3 Foot 2 Inches and one half broad, and 6 Foot 5 Inches high, which are Windows of two Diameters.

LET us now suppose another Room (mark'd B) on the same Range, whose Height is 12 Foot, as the preceding Example is, and its Proportion shall be the Cube, the Product of that Cube is 1728, and its Root is 41 Foot 4 Inches, or thereabouts; divide that 41 Foot 4 Inches in two Parts for two Windows, and each will be 20 Foot 8 Inches of superficial Light, and those will be two Diameters in Height, and the Magnitude the same as the preceding Room.

P 2

FOR

FOR Example sake I will only suppose one more Room (mark'd C.) upon the same Range, and 12 Foot in Height, whose Proportion shall be the Arithmetical of 3, 2, and 1, that is, its Height being 12 Foot, the Breadth will be 24, and Length 36 Foot, the Product of those Numbers multiplied together will be 10368, and its Root 101 Foot 8 Inches, or thereabouts; divide this Room into five Windows, each Window will have 20 Foot four Inches superficial Light, and the Magnitude will be near or equal to the others; and if the Proportion be 6, 4, and 3, and cov'd, the Light is the same.

THERE is but one Objection to this Rule to make it universal for all kinds of proportion'd Rooms on the same Floor, and that is, the Square Root doth not always happen to be exact enough for to make them alike; but as the Variation will be so small, it may be made use of; and if the Area something exceeds the Standard of the principal Rooms, that Room may be converted to a Use which requires more than Standard Light, and the Necessities of Families sometimes require it.— But however, the Rule will

will serve for the Purpose near enough for any Practice.

If you extend the Rule to larger Rooms, the same Methods will be preserv'd, even if their Height be continued through two Stories, if the upper Windows be made Square, and to have two Tire of Windows. Let us suppose the Room (mark'd D.) with two Tire of Windows in Height, to be 50 Foot long, 40 Foot wide, and 30 Foot high, the Arithmetical Proportion of 5, 4, and 3; the Product of those Numbers multiplied together will be 60000, the Square Root of which Sum is 245 superficial Feet; divide that Sum for the Tire of Windows into three Parts, or take one third of it, and that makes the Attick or Square Window 81 Foot 8 Inches superficial Light, divide this into five Windows, and they are four Foot and half an Inch Square, and the five lower Windows consisting of 163 Foot 4 Inches superficial Light, being what remains out of the 245 Foot the Root, each of these Windows is 4 Foot half an Inch by 8 Foot 1 Inch, or two Diameters, which 245 Foot, the whole Sum of the  
Square

Square Root of the Room, will sufficiently illuminate the same.

I HAVE been the more prolix in this Description, because the giving a proper Light to a Room by a Rule, has been, perhaps, the least thought of in the Disposition of the internal Part of a Building; and as I esteem it a necessary Part to be understood, I thought it incumbent on me to form some Rule, whereby the Knowledge of it might be attain'd.

STAIR-CASES are the next Part of internal Designing, and require Judgment in the Disposal; they must be so plac'd as to be well illuminated, contiguous to the Center of the Building, or else more than one in Number; and so plac'd, that each Room may be near them, and have an easy Access to them, without incommoding any of the rest of the Rooms: Their *Going* should be large, the *Tread* broad, and the Rise easy for principal Stairs; for Back Stairs, less of each is requir'd, being more for servile Uses than Grandeur; and they should be so plac'd as to be more remote from the Eye, and in the more common Apartments

## ARCHITECTURE. RUE

ments of the Building, either as they lead to Servants Lodging-Rooms, or are the Access to the useful Apartments in the lower Offices of the Building.

THEIR Form is various, as Rooms are; but one Observation is necessary, which is, that the Flights be not too long, and to have no Winders in principal Stair-cases: The first give an Uneasiness, and soon weary the Ascender, for want of half-Paces to rest on; and the latter is very incommodious, if, by Chance two Persons meet on a Stair-case with Winders, and the Going is not more than ordinarily large, their Passage is incommoded, and often proves inconvenient.

BUILDINGS in Town require *Contrivance* more for Convenience than Grandeur; the Rooms cannot be so spacious as those in the Country, but however Regularity is to be observ'd; the Chambers or Lodging-Rooms, require to be as far from the Noise and Tumult of the Street as conveniently can be plac'd, and so near a Stair-case, that if any Accident by Fire (which too frequently) happens, an easy Access may be had

## 112 LECTURES on

had to it; for which Purpose all Back Stair-cases in Town-Houses, as they generally are carried from the lower Offices to the Roof, should be of Stone, and the Walls of them Stucco, that no Danger might prevent the Safety of getting down them, to avoid the Fury of the Flames; and such which are plac'd about the Middle of the Building and illuminated by a Sky-light, are by far the most convenient.

As in Town-Houses, so in the Country, the Kitchen should be remote from the House; the *Steam*s arising from thence are offensive, and the extream Heat of it often renders the Apartment over it very irksome to bear: The servile Offices are best always to be some Distance from the main Building, the House will be less troubled with Noise, and less incumber'd with such Things which are requir'd to serve the Purposes of a Family.

OFFICES to Buildings are variously situated: Some are continu'd in a Range with the Front of the Fabrick, some join them by a circular Colnade, and others are environ'd to the principal Front: As  
*Burlington-*

*Burlington-House*, and *Montague-House* in *Great-Russel-street*. A Pattern of a circular Colnade is *Buckingham-House*; and that which the late unhappy Conflagration destroyed of the Duke of *Devonshire's*. These, indeed, are under some Restriction for want of Room; but I think it not adviseable to contract or enclose a regular Front, but rather leave the Opening spacious and clear; an Inconvenience attends it likewise, that is, the Smoke of those environing Offices often proves offensive to the House.

IN the Country, where Room is to be had, the *Architect* has Scope for Fancy, and the Offices should be something analogous to the Front of the House, always observing to make them plainer; and where Decoration and Dress adorn a Front, in the Offices it should be used very sparingly.

IF the Offices are continued long in a Range with the Front, they should fall gradually away, by Breakings, and terminate, as it were in a Point. I can best describe this beautiful Manner of Designing, by a Building erected near the Town, and is (I think) the Design of

Q

*Inigo*



# 114 LECTURES on

*Inigo Jones*, and that is *Chelsea-College*; to the North Front there you find that easy declining of the Range, like a beautiful Landskip diminishing from the Eye by a gradual Shade; perhaps here and there a little Hill arising, from thence sinking into a Lawn, which by alternate Changes are extremely pleasing: There is nothing wanting to make that a perfect Design, *but* to have made the middle Part a Portico. so be brought out as far as the Steps.

PORTICO's, or *Porches*, undoubtedly give a Grace and *Nobleness* to a Design; something Majestick strikes the Imagination, if they are duly proportion'd. It is to be observ'd, that they should never be less than four Columns, nor more than eight to them; except at the Angle of it a Pilaster and Column are join'd at their Plinths, and the Inter-columniation be of the *Corinthian* or Proportion *Systylos*,— and always are suppos'd to support the Roof, as in the Manner of the Ancients, so justly imitated in the Front of *Covent-Garden Church*, the Design of *Inigo Jones*.

PEDI-

PEDIMENTS are generally, and indeed the most beautiful Manner of covering a Portico; as St. *Martin's* Church, and St. *George's Hanover-Square*: And, indeed, most of the antient Temples of *Greece* had their Entrances in the same Manner; and many Noble Palaces still are adorn'd with them. The Proportions are so well known, I shall not trouble you now with a Repetition of them.

WHEN we consider the Dress of a Fabrick, either in the internal or external Part, it is there the *Architect* is to shew his Skill; he is to adapt that to the Magnitude, or Situation of the Building, always rather below Profuseness, than to attempt it. Dress is the most expensive Part, either within Side or without; but where-ever Enrichments are applied, they should be few, and more particularly without Side. If Carving is to be introduc'd to Ornaments, it should be in such Places as are defended from the Weather, as in Cornices, &c. for where Snow or Rain can lodge in it, they are of a decaying Principle, and Time will soon waste away those tender

der Parts, the Beauty of it will fade soon ; for the Parts where the Rain lodges will receive Dust, and when it overflows, that will stain and sully it ; which Inconveniencies would be prevented, were the Members entirely plain.

STONE will endure long, but among those we have, *Portland* is the most beautiful as well as durable ; and if a Front is not wholly of Stone, the Dress to Windows, Strings, Fascia's, Cornices, &c. will be very agreeable ; but of all things Stucco, or Finishing, to external Uses, are to be avoided ; a few Years destroys it, and its Colour soon fades ; if it be painted, it will prove a continual Expence, and the Incidents of the Seasons will even then destroy it in a little time.

IN Buildings of Brickwork, a Plinth of Stone is requisite, though no Dress is applied to the other Parts. Stone is not only more durable, but as they are in large Pieces for the Foundation, they will be a better Tie; and not so easily crush'd by the Weight above, to occasion a Settlement. The Rains which fall near a Foundation from a Cornice, &c. often penetrate into the Joints of  
Brick-

Brickwork, and by that Means weaken it, and if requir'd to be clean'd, cannot be so well done as Stone; but then it may be observ'd, that where-ever it be used, it will be an Enlargement of Expence.

AN *Architect* has, undoubtedly, many Difficulties to meet with in the erecting a Building; want of Materials, of proper Workmen, and too often of Substance; whereby his Skill in the Execution is requir'd to supply such Defect, by adapting Things necessary in the Room of those which would be undoubtedly more useful: But then the greatest Part of his Judgment will yet appear, and that is in the Order, Regularity, and Convenience of the Fabrick; and if a skilful Design be perform'd with Brick instead of Marble, it will have the same Beauty, the Proportion must infallibly please.

A PLAIN regular Front, without Dress or Ornament, if justly proportion'd, will better satisfy the Taste of the Judicious, and more immediately strike the Eye, than all the gay Dress and Decoration of an ill-proportion'd Design:  
There

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There is a kind of sympathizing Pleasure from Nature, when a just Proportion is observ'd *in the Performance* of a Building.

INTERNAL and external Drefs require Rules to be applied to them, and even the minutest Parts require a certain Proportion; there is a Way which both Art and Nature have pay'd for us, and when we deviate from that Path, we wander in Uncertainties. If we apply our Reason to things, we shall soon find it true, that every thing requires to be perform'd by infallible Rules: This is what I have all along aim'd at in these *Lectures* as to Generals, and if in Particular things it be attempted, the same universal Law of Nature holds good; I shall therefore in my next *Lecture* treat more particularly of Decoration and Drefs, internal and external.

It is impossible by Words to explain things to your entire Satisfaction; but as far as the Nature of such Definitions will extend by verbal Explanation, I shall endeavour at; hoping you will consider how defective such Descriptions are, compar'd to a Design delineated on  
Paper;

ARCHITECTURE. 119

Paper; and when you are pleas'd to give Allowance for such Defect, I shall esteem it a Favour, and shall communicate any thing to you worthy your Notice: In the mean time I am,

Gentlemen,

*Yours.*

Read to the Society, *March* 11, 173 $\frac{3}{4}$ .







## LECTURE VIII.

GENTLEMEN,

**M**Y preceding Lectures consisteth chiefly of a Description of Proportions to be used in *Buildings*, in which the external Part as well as the internal, are confined to stated *Rules*. I have endeavoured so to explain those *Rules*, to make them useful in the *Practice* as well as *Theory* of all kinds of Building, and with as much *Brevity* as such Definitions would admit. There remains now to compleat my Design, only a proper disposition and proportion of *Ornaments*, to be apply'd to deck the *Fabrick*; and indeed, this is the most difficult part of *Architecture*, so to dispose of *Ornaments* as to fill up useless *Vacuities*, and to give a proper *Alleviation* to the *Eye* as it passes from *Space* to *Space*, preserving an *Analogy* through the keeping of the whole *Design*, and so filling and decorating the

R                      Vacancies,



Vacancies, as not to crowd and incumber the Parts with superfluous Dress or Ornament.

BEAUTY and *Proportion* are inseparable, for which Reason Beauty is always center'd in Proportion, and Proportion is ever beautiful; therefore, in Nature there are stated Laws, whereby they are form'd: But when we *deviate* from Nature, the farther we recede, the more remote we are from Elegance, because Nature is constant and invariable in her Production, and admits of nothing to make her pleasing or beautiful but *Proportion* and *Harmony*.

IN Architecture, therefore Rules are to be made use of, which when observed by an *Architect*, his Fancy, or Genius, will give a proper Contrast to a Design. A Statue may have an elegant Proportion without Dress, and be in Nature just, yet Nudities are not so pleasing to the Eye, as a Statue in Cloathing, after the antique dress of Drapery, and even in Dress, the fine Proportion of the Statue may be preserved; the tender Softness of a *Venus*, or the muscular Robustness of a *Mars*  
or

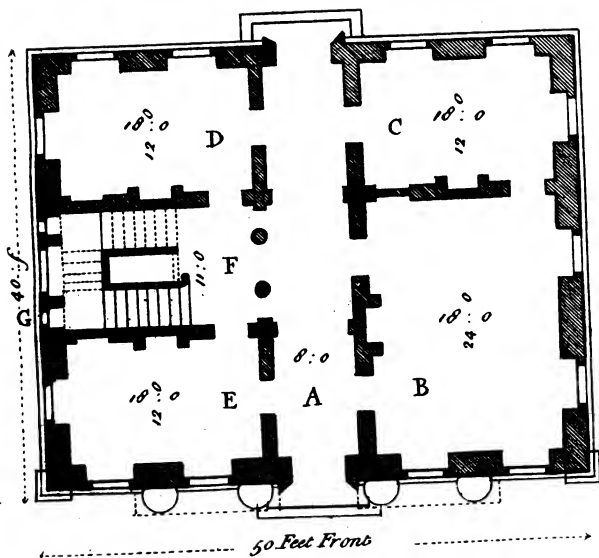
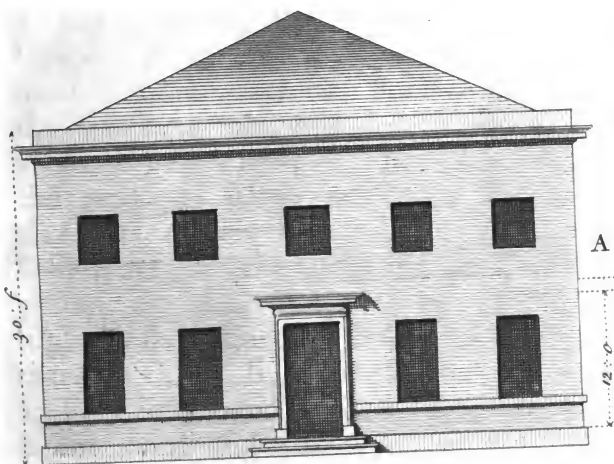
or a *Hercules*, may be shewn through the Drapery in proper Parts; but then a fine proportion'd *Statue* may have a superfluity of Dress, or be illy plac'd, or want *Elegance* in Design, which destroys even the Beauty of the Statue; so in Buildings, a plain just proportion'd Design will always please the judicious Eye, but a proper Disposition of *proportioned Ornaments* adds to it a pleasing Gracefulness, and renders it abundantly more agreeable, where the Parts which deck the Fabrick, are only just what are necessary, without *Superfluity* or *Want*.

OUR modern Architects have made Ornament, or Dress, the principal Part of their Performance, and have given Decoration to ill-proportion'd Fabricks, and indeed, Superfluity is generally the thing to attract the Eye; they garnish the in-elegant Design, to atone for the Disproportion of the Parts, and croud and fill the Spaces by some gay Dress, to conceal the want of Proportion; which is only a kind of un-meaning Attempt at Elegance, which our greatest Architects are not exempt from, tho' in other Places have shewn a refin'd elegance

elegance of Taste worthy Imitation. Examples of the former Class are too numerous, and the latter are more envied, perhaps, than admired; which makes such Examples less known by young Students in Architecture, to attract their Attention.

THAT the Rules which I have laid down may be of use to apply to Buildings, I have chose a Design whose Proportions are the same which I have made use of in the internal Parts of a Building, as is shewn in the Sections Plate the IIId, p. 107 in which is the square and arithmetical Proportion 5, 4 & 3, which I have chose for the Plan, and Profile before us, Plate the IIIId. The Plan is 50 Feet Front, 40 Feet deep, and the Height of the Building is 30 Feet from the surface of the Ground, to the top of the Blocking Course.

As the Design is small, I have divided the internal Parts in proportion to the Magnitude of the Design, as may be seen by the Plan which is of the principal Floor. I propose the House to stand in a *Fosse*, and such Offices for the use of the House to be



Robertus Morris inv. et delin.

Toms sculp.



# ARCHITECTURE. 125

be below the Plinth, as shewn in the Profile above it; the Entrance to those Offices being propos'd at the End, mark'd G --- by the Stair-case: As those Offices are principally for Servants, I have omitted the Plan. On the principal Floor are four Rooms, three of which have the Proportion Sesquialter, or the Cube and half, proposing all that Floor to be 12 Feet high in the Clear, in which the Rooms mark'd C, D, E, are 18 Feet long, 12 Feet wide, and 12 Feet high, which is the Cube and half.

THE principal Room mark'd B, I have given the Proportion of 4, 3, and 2, it being 24 Feet long, 18 Feet wide, and 12 Feet high. The Front Walls are two Bricks thick, or one Foot six Inches, each; which makes

F. I.

|                        |              |
|------------------------|--------------|
| The two Walls          | 3 0          |
| The Room mark'd A, is  | 24 0 Length. |
| The Partition is thick | 1 0          |
| The Room C, is width   | 12 0         |

---

Makes Feet 40, 0 which is  
the Depth of the Building.

THE

THE Front being 50 Feet, I propose the end Walls one Foot ten each, which is two Bricks and half;

|  | F. I. |          |
|--|-------|----------|
| Both making                              | 3 8   |          |
| The Room B, is                           | 18 0  | Breadth  |
| The Wall next Passage A,                 | 1 2   | Thick    |
| The Passage mark'd A, is                 | 8 0   | Wide     |
| in the Clear                             |       |          |
| The middle Wall next the                 | 1 2   | Thick    |
| Stairs, and Rooms marked C, D, and E, is |       |          |
| The Rooms mark'd E, D,                   | 18 0  | Long     |
| <hr/>                                    |       |          |
| Makes                                    | 50 0  | Feet the |
| Front of the Building.                   |       |          |

IN the Plan I have endeavour'd to preserve a strict Uniformity and Convenience; each Room I have illuminated with a proper Light, without changing the Regularity of the Front; and at the End G, I have made a *Venetian* Window the whole opening of the Stairs, which will be an Illumination to the Passage mark'd A. At the Landing-place F, I have made a Screen of Columns to the Stairs, which will form a Gal-

a Gallery in the Attick Story ; and each Chamber be convenient and private, by making Closets over the Passage. The Attick Story will be the same Plan, without altering the Proportion of the Rooms ; and as they are intended for Lodgings, will be sufficiently lighted.

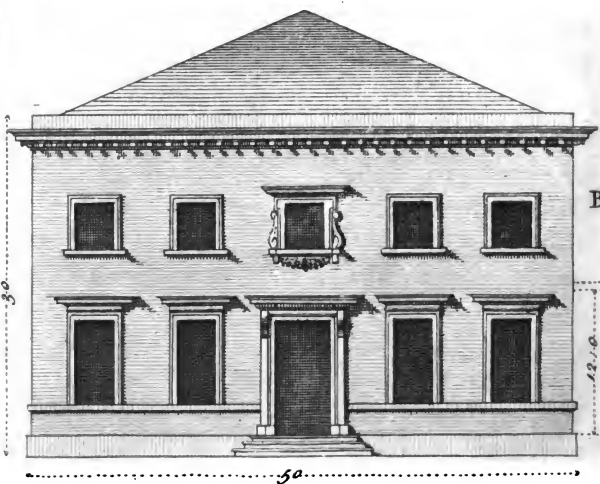
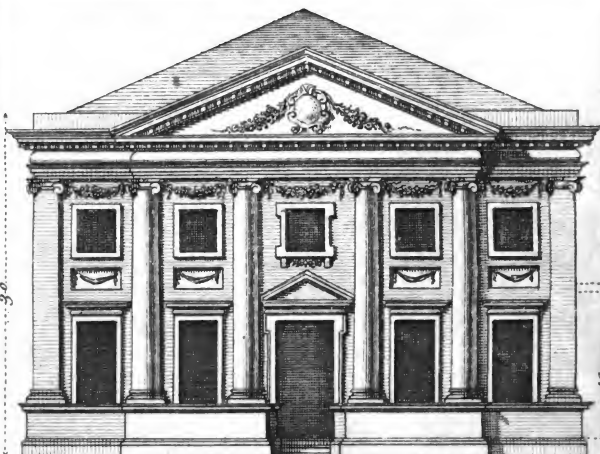
It may be further observed, that each Room has a Communication to to the Stairs, and to each other, without incommoding any, and renders them private, as well as regularly proportioned. I would propose as to internal finishing, to have the lower Offices, except one Room, all plaister'd, or done with Stucco, and those Rooms pav'd with Tile or Stone, as can be most conveniently had in the Country, for which this is designed. The Stairs likewise I would have of Stone for the safety of the Inhabitant in case of Fire. The Walls of the principal Floor should be wainscoted with Deal, and the Cornices plaister'd and enrich'd in proportion to the external dress of the Design ; boarding the Floors with the best sort of Deal, and enriching the Ceilings, especially in the Room mark'd B, in which the Chimney-piece, the  
Dress,



Dress, and Ornaments to the Doors and Windows, being all to be suited to the Elegance of the external Part, which is to be the Guide to finish the internal.

THE Profile mark'd A, I have divided into such proportion'd Windows and Piers, that gives an equal Margin round like the running of a Frett, which always give a Beauty to the most plain and simple Designs; and it is this, when rightly applied, that makes Dress and Decoration pleasing, where it is used to preserve an equal Space from Vacuity to Vacuity. To contract a large plain Space, or to alleviate the Eye in passing from one part of the Design to the other, which by breaking into various Parts answers the End of enriching a Building. As the Profile before us is composed of the most natural Numbers, to give Pleasure to the Eye, you may see Harmony even in its plainness. But if the Situation, or the Inhabitant or Owner require more *Vivacity* and *Gaiety*, the front B Plate the 4th, will be a proper finishing; and here, the Windows, Piers, Heights, and every thing are the same as that mark'd





Robertus Morris inv. et delin

Toms sculp

mark'd A, only supposing the Ornaments lain on it without altering any part of the *Disposition* or *Magnitude*; yet the Margints or Spaces are preserved, and a proper keeping to the Design.

If the most elegant Dress is required, let the Profile C, be supposed to be the same with A in Magnitude, &c. as is before observed; only laying on the Enrichments to adorn the *Fabrick*, the Spaces are preserved by breaking the Distances with Festoons or Drapery, &c. which give a Gracefulness and well proportion'd Symmetry to the whole. It is easy to see the same Graces in the beautiful Statue ornamented with proper Drapery; and you may trace the plain Profile through all the Elegancy of Architecture, where a just Proportion has been us'd in the Parts which compose the Design; and as in a Statue the Muscles, Nerves, &c. have a just proportion to the Magnitude of the whole; so, in a *well proportion'd Building*, every Part should be consider'd, as it relates to the completing the Design, to make it *strong, beautiful, and convenient*.

THE minuter Ornaments made use of to adorn Doors, Windows, &c. have

S

such

such Proportions already assign'd them, that no Addition can be made to beautify them; only it must be remembred the fewer Divisions they consist of, the more elegant they will appear; and when Mouldings are used at any considerable distance from the Eye, they should be few in Number and of an *ample Relievo*; for where they are small, a redundancy of Parts scatters the angles of Sight into a Multitude of Rays crowded together, and renders the Object we view a perfect Confusion.

IT has been the just Observation of an *ingenious* Friend, that in Dress and Decoration the *Ornaments* which deck the Design should be natural, and all the Parts should have an *Analogy* one to the other: As suppose in particular, the ornamenting a *ceiling* of a Room, the Beams which are enrich'd should be lain over *Piers*, the Pannels answer Doors or Windows, and the Margints be preserved the same as the *Sides* of the Room; for in standing on one *Side* of a Room, the Ceiling of the opposite *Side* should answer the division of the Walls, that they might appear in one *Line*. Few Persons have strictly observ'd this Method; but as a Proof of its BEAUTY when perform'd, observe

observe the *Ceiling* of the Banqueting-house at *Whitehall*, where it is strictly executed; and compare it with the *Ceiling* of the new Building of St. *Bartholomew's* Hospital, and you will your selves readily judge the necessity of observing those Methods in dividing the Compartiments of a Design, and what Effect they have where Fancy only has directed the Designer in his Choice of Decoration.

GENTLEMEN, It has been my chief Design in these Lectures to lay down Rules for most of the *principal Branches* of *Architecture*; and if I have any where deviated from the common Path, your own Judgments will guide you to the properest Choice. I do not lay them down for absolute, but if they are *practicable* they may be *useful*. Our Judgments vary much in the most common Opinions; and if there should be different Sentiments about the improvement and refining so noble and extensive an *Art* as *Architecture*, yet it is certain, where RULES are the Guide to our Judgment, such Opinions are built upon the most solid and lasting Foundation.

WHEN

WHEN I consider *Architecture* in its utmost Extent, and how many different Designs may be compos'd from those few RULES which I have laid down for the *general* Proportions, it always gives me an agreeable Pleasure in the Reflection, to see from one small Fabrick new Embellishments, and rising to noble Buildings and Palaces; and all performed by the same Rules, the same analogus Proportions, must be a pleasing Theme to employ the Thoughts of a speculative Genius. When I consider how many successive ages of Time have roll'd away since the Art was perfected, and how the noble Actions of eminent Persons have been transmitted to us by *publick Buildings* and *monumental Ornaments*, and how future Ages may view the Works of our present Worthies in their *Palaces* and *Seats* of Retirement: When I am led to such Contemplations, it always gives me an unspeakable Satisfaction.

To acquire a just Taste of Designing, must be to be well acquainted with the Designs of the Ancients, to traverse the antique Buildings of *Greece* and *Rome*, and compare them with the Works of *Serlio*, *Palladio*,  
and

## ARCHITECTURE. 133

and others; and see which is most agreeable to Rule, or most affects our Passions in the Review; where Nature is most apparent, there undoubtedly *Harmony* resides, whether the Design be plain and consist of but few Parts, or whether it be enrich'd with Ornament or Decoration; if RULES or NATURE have been applied, those are the Examples worthy our Choice.

COMPARE the Portico of St. *Martin's* Church with some of the ancient Temples of *Greece*, in the Works of *Vitruvius*, or the *Pantheon* at *Rome*, and there you will discover true elegance of Design, and a happy refinement of Taste. To see Buildings of more than 2000 Years distance in Date be thought worthy of Imitation, shews not only the excellency of Architecture in those Times, but the Genius of this present Age, who can divest themselves of modern Error, to trace the Paths of Antiquity. The Ancients were generally grave and solemn in the decoration of their Temples, but their *Theatres* and *Palaces* had gaiety and dress to enliven the Design, and were never sparing in Ornament, so it did not border upon *Profuseness*.

## ORNAMENES

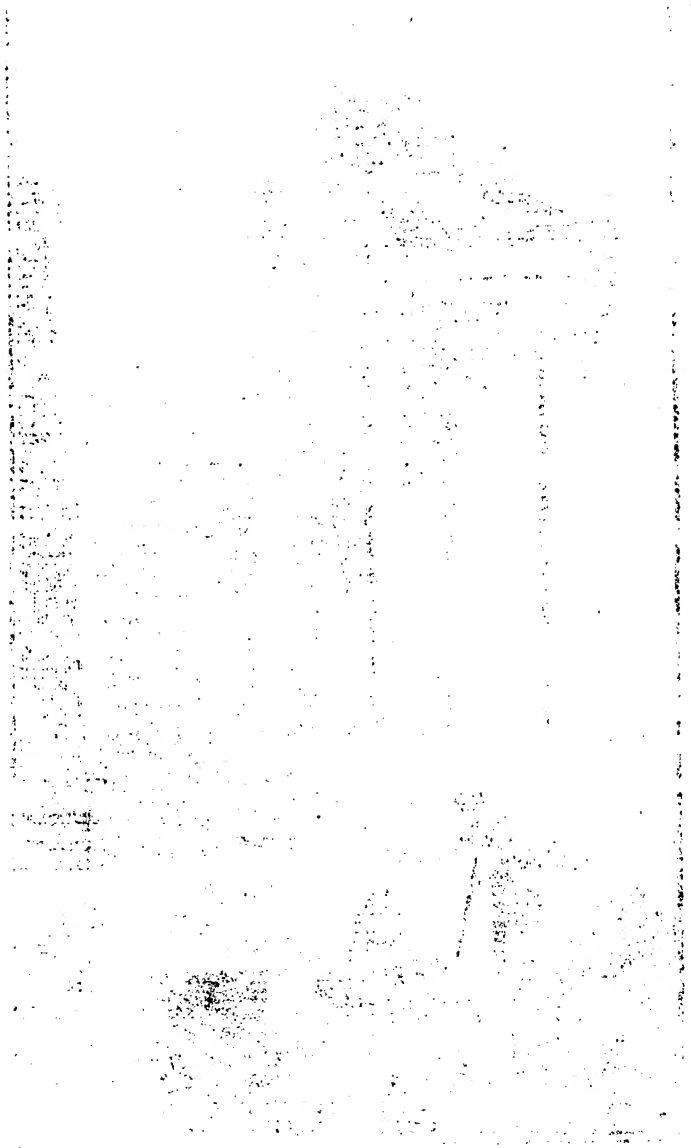


ORNAMENTS certainly give a noble Contrast to a Design, where they are appropriated to the Purposes of the Building; but it must be consider'd, Festoons of Fruits and Flowers would illy become the Entrance of a Prison, or frosted rustick Work the Approach of a Palace: Propriety in Ornaments is therefore a grand part of Designing, and where it is justly introduc'd with elegance of Taste in *Disposition* and *Proportion*, shews an Accomplishment in Judgment, which is requisite for a compleat ARCHITECT.

As I have now compleated the general Proportions, it may be expected that I should proceed to treat of the particular Magnitude and Form of Ornaments, which deck and embellish the *Fabrick*; but as that will be as extensive in Description, as what I have hitherto describ'd to you in my Seven preceeding Discourses, I shall make the Orders and Ornaments of *Architecture* the Subject of future Lectures, when Opportunity gives me leave to trace a Subject so agreeable, and of so universal extent as ARCHITECTURE. In the mean time I remain

GENTLEMEN,

Yours, &c.



*To face the title.*



*W.H. Jones sculp.*

# LECTURES ON ARCHITECTURE.

Consisting of

## RULES

Founded upon

HARMONICK and ARITHMETICAL  
Proportions *in* Building, appli-  
cable to various SITUATIONS.

DESIGN'D

As an agreeable *Entertainment* for  
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BUT

More *Particularly Useful*, to all who  
make ARCHITECTURE, or the  
*Polite Arts* their Study.

---

### Part the SECOND.

---

Read to a SOCIETY established for the Im-  
provement of ARTS and SCIENCES, and  
Explain'd by Examples on 13 Copper-plates,  
with the Proportions apply'd to Practice.

---

By ROBERT MORRIS.

---

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T O

**ROGER MORRIS, Esq;**  
Architect, &c.

SIR,



**F**our *Affinity* or *Friendship* are *Motives* to induce me to *address* this Second Part of my *Lectures* to You, I am more immediately obliged to it, from the ERUDITION I have received in your *Service*. From thence arose the *Ideas* of the following Designs, which I have interspersed in this abstracted Essay — If I have any where produced *something* that may be free from SEVERE Censure, they are such Parts only, where I have taken the *most* pains to imitate Your *Manner* of Designing, in the *Practice* as well as *Theory* of the ART. Where the *Imperfections* and *Blemishes* of TASTE are more visible, THOSE are owing to Negligence, the want of justly adhering

to *Yours*, or, perhaps, a singularity of Opinion, a *Fault* which I find a Difficulty to surmount.

WHERE ARCHITECTURE, among other Topics *engross* the Conversation of the *Beau-Monde*, YOUR Productions must sometimes be the *Thémé*; therefore, that these *petit Sallies* of my Imagination may be known by the generality of Mankind, from those *nobler* Patterns You have produced, I shelter myself under the Sanction of YOUR NAME; Comparison will soon distinguish the great Difference between *Essays* in *Theory*, and *Practical Demonstrations*.

BE pleas'd, Sir, to *receive this* Amusement of a few vacant Hours, as an Acknowledgment of the sincere *Duty* and *Obligation* I lie under to You. I shall still esteem myself happy in the Continuance of Your *Friendship*, and in subscribing myself, with all due Respect,

Your *Loving* Kinsman,  
and *Humble* Servant,

Robert Morris.



# P R E F A C E

**I** Think it necessary to say something of this Second Part of my Lectures, as they consist chiefly of Demonstrations to the First; those are the Basis on which the several Designs of these are erected. It may be observ'd, I have by Examples prov'd the Rules practicable both by internal and external Magnitudes. Verbal Explanations of the minute Parts of Building I think unnecessary, supposing the Reader qualified to comprehend the Proportions of the Orders, and the several Parts of the Orthography and Ichnography of the Building.

SITUATION has been my next Care, and in this I have been vigilant to appropriate my Design to the imaginary Spot. If I have been poetick in Description, the Remarks are only from such Situations which I have frequently taken  
from



*from Nature it self, and I esteem Situation so extensive a Branch of Architecture, that no Building should be design'd to be erected, without first considering the Extent of Prospect, Hills, Vales, &c. which expand or encircle it; its Avenues, Pastures and Waters; all which furnish the ARCHITECT with proper Ideas, and the Modus must be shifted from one Scene to another, as Necessity requires.*

THESE Lectures, therefore, are rather a brief Explanation of the Art of Designing, and may, perhaps, contain some Hints not unuseful to our greatest Artists; few have so extensively describ'd Situation, and a proper Application of Designs to it, as may be found in this abstracted Essay, in which I have attempted to lay a Foundation to an ART which must infallibly be useful, being establish'd on so firm a Basis as Rules and Proportion. I have been an Eye-witness of such an infinite Number of ill-appropriated, as well as disproportion'd Designs; Rusticity in the room of Elegance, and Gaiety where Plainness and Simplicity would have been far more pleasing. I say, such frequent Errata's led me to consider some sure unerring RULES for appropriating Buildings to the Spot, which the Hints of these Examples may prove the Necessity of. As I believe few  
Situ-

*Situations can be, but what will come under some of the Rules I have laid down, so there are few Situations but what I have in some measure touch'd upon,*

*I N Situation I have not carried my Description so far as Shakespear, in that beautiful one of Dover-Cliff, in the fourth Act of the Tragedy of King Lear, because I imagine such a Spot improper to build on; but if any Attempt of this kind is required, to erect a Fabrick on so uncouth a Scene, it should be the Proportion 3, 2, and 1, without Decoration or Dress, and its Finishing the most plain and massy that could be invented. Such Prospects generally fill the Eye; but with Wonder and Surprise we survey the distant Scene, it only leaves a kind of mingled dread upon the Mind, and that pleasing Horror soon vanisheth. Such an extended Ocean is still one continued Image; the Seas are only varied from a Storm to a Calm, and so vice versa to a Storm again. Whereas the Land affords a vast Variety of Hills, Woods, Shades, Rivers, Corn, Fruits and Pastures. The Seasons change all these; the Spring decks it with a varied Verdure, a particoulour'd Painting of Flowers and Blossoms. The Summer shifts the Scene to ripening Fruits; the Meads and Pastures wear another Face.*

*In*

*In Autumn the spacious Fields are gilded  
with a Yellow Hew. —*

—Bedeckt with Beauties in a swift Decline,  
For hoary *Winter* lops the loaded Bough,  
Swells up the Surface of the *gliding Stream*,  
Pours out its *Rain*, or whitens all the *Hills*,  
Makes *Nature* *naked* till the Spring returns,  
Then, round the same *Variety* again ;  
Revolving *Beauties* ev'ry where appear,  
And last resembled *this* succeeding Year.

*I have oft been deceived by a pompous  
Title to a Book, and which has scarce  
touch'd upon those Parts which in the Title  
seem'd most sonorous, therefore I hope the  
Reader will give himself the trouble of a  
fair perusal before he pass Judgment in  
Favour or Dislike to this; and when he  
candidly declares his Opinion, he may pro-  
bably say SOME THINGS have pleas'd him.  
This has been one Aim of my Writing,  
and whatever is the Fate of it, I am  
content to be censur'd, since, as Cato ob-  
serves, THE BEST MAY ERR.*

LECTURE

# LECTURE

The N I N T H.

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*P A R T the Second.*

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G E N T L E M E N,



THE Reception which the first Part of my Lectures on Architecture hath found since their Publication, hath in some measure encourag'd me to continue 'em. Having always propos'd THOSE only to be a preparatory Introduction to the more important Branches of that NOBLE and USEFUL ART, I intend not to omit any thing that can be conducive to the Improvement of it, and which I shall attempt in the following Lectures, which I have prepar'd for the ensuing Season for your Entertainment.

T

TRUE

TRUE ARCHITECTURE is a *Science* almost universally talk'd of, and even attempted to be practis'd, but it is not so well understood; the superficial Part of it is known by many, but something more than that is wanting. The *judicious Architect* hath many Difficulties to meet, many Obstacles to encounter in the Art of Designing; and even *Proportion* it self is not all; there is the Application, the Assemblage of those *Proportions* requir'd to be justly appropriated to the Uses of the intended *Fabrick*. The *Orders of Architecture* are only the Dress and Garnish of *Building*; *Proportion* is the principal Basis; and the applying those *Proportions* to proper Situations, is the most noble, the most extensive, and difficult Branch of the Art. Embellishments require Skill in their Disposition and Arrangement, and a nice Genius so to use them, that they may be said to have neither Superfluity, nor Want; the first betrays a *Lavishness* of Fancy, the latter a *Meanness* of Taste. But it is to be observed, that Situation is in some measure to direct the Architect how to apply his Ornaments; making Art, as it were, an Handmaid to Nature, by appropriating them to the Spot on which the *Fabrick* is to be erected.

As

As in my 5th Lecture, Page the 68th and 69th, I have shewn what kind of Dress different Situations require, and how to appropriate the Decorations of the Design, that they may be analagous to the Spot: I propose in these ensuing Lectures to assign some certain Situations, and apply one of each of my *Proportions* to them, so changing them to answer the Purposes of Designing; using Ornament or Dress as a necessary Branch of the Art, not as if it was intended for Profusion, but as a useful Embellishment; and in the same manner so to dispose the internal Parts of Building, according to the Proportions I have already assign'd, Page the 75th, that no Part of the Structure may be said to be undescribed, or unintelligible, as far as a Delineation or Draught is capable to express. This is the Basis upon which I propose to continue this Second Part of my Lectures, which will render this Undertaking, though a kind of abstracted System of Building, useful to all who are immediately concerned in the Practice of Architecture.

THE grand Branches of the Art are unlimited in Extent, they are not confin'd in Space, or circumscribed by

T 2

Bounds;

Bounds; for by changing the Modus, or Style of Designing, the same Analogy may be preserved through the most *magnificent Pile* that can be invented; and even those Proportions may be differently modified, and differently embellish'd, without changing the General Proportions, those being only the Ground-work for an *Architect* to entertain his Genius. The Cube may be divided into more or less Parts; it may be only 20 Feet, or extended to 50, &c. The same *Proportion* in both will have equal Graces; and even in a Room in Miniature, JUST PROPORTIONS will have their *Charms*.

IN delineating the Plan or Elevation of a Building, the Out-line is to be first form'd, as in the Plan and Profile before us, which are composed of 3 Cubes, as represented by the circumscribing Circles. It is from thence the internal Parts, as well as the *ornamenting* and *disposing* the proper Voids, and Decoration of the Front, are to be regulated; and those internal Parts are proportion'd by first determining the Height of the principal Story, as may be seen at the End of the Profile; each Story being figur'd 10 Feet in the Clear, this, as a Standard to the whole, gives the Length and Breadth of each Room by some of those Proportions :





Robert Morris in et al.

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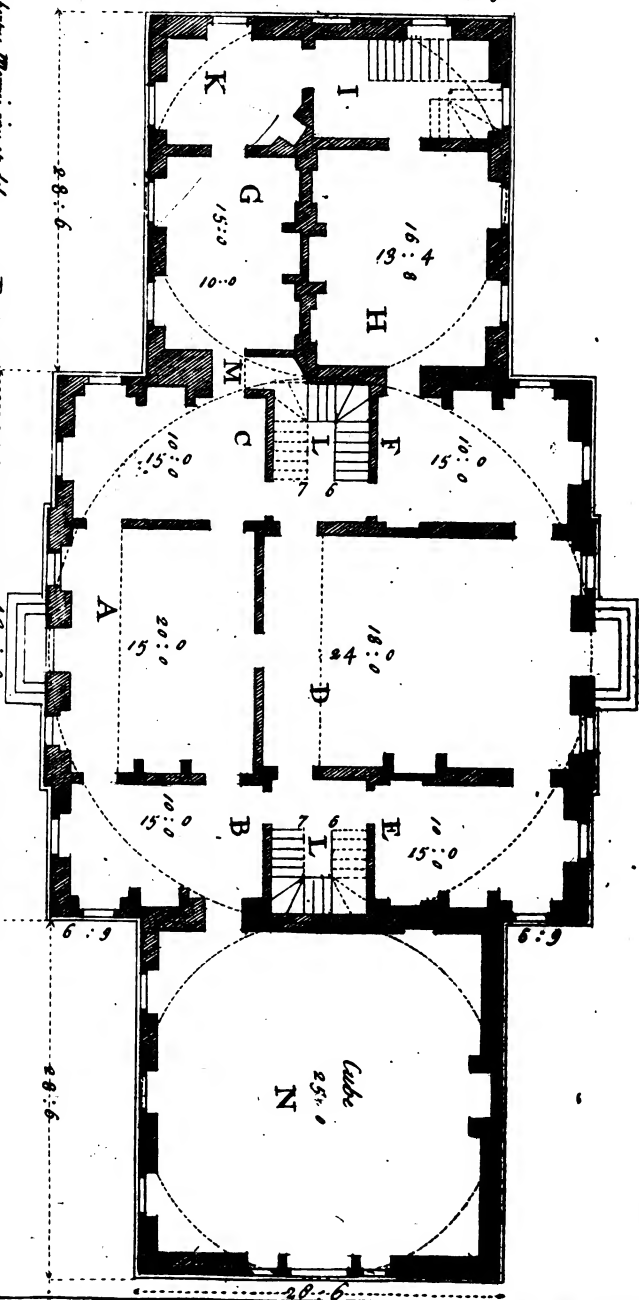
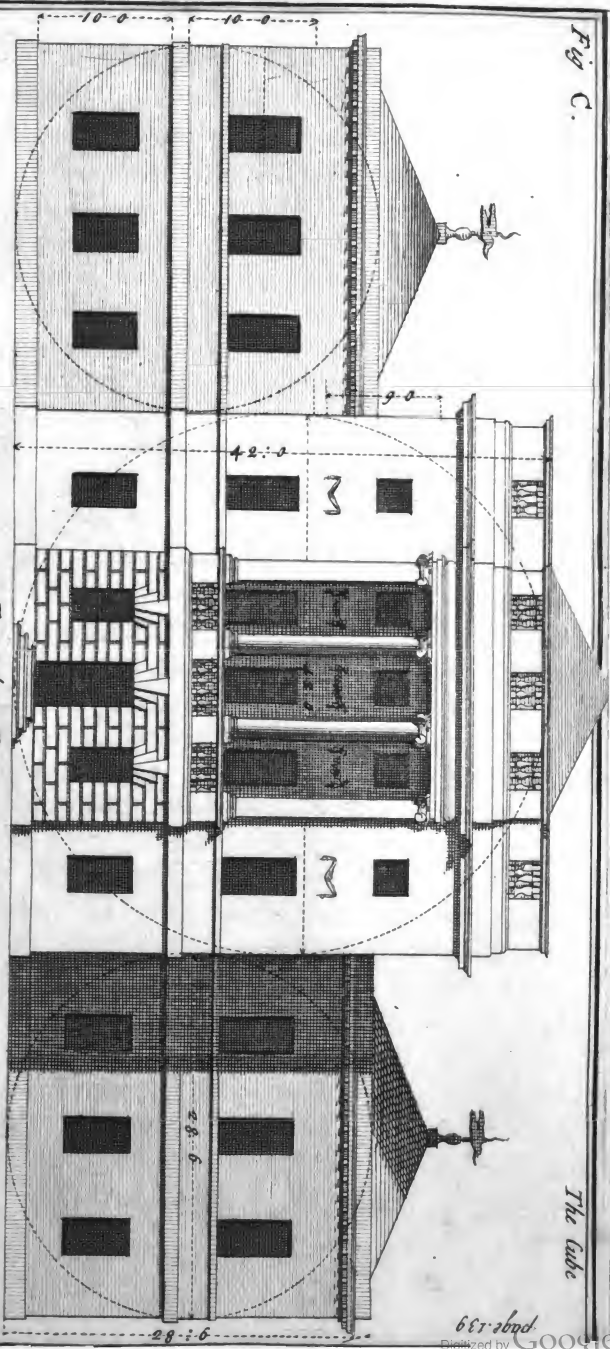


Fig C.

Extends 99 Feet



The Cube



tions: So that by dividing the Height of the Room which you intend to allot by some of the *Proportions*, into a certain Number of equal Parts, the same Parts are the Standard by which you assign some allotted Parts for the Length and Breadth of the said Room. To make my self more clearly understood, I will call a Room the *Arithmetical Proportion* of 5, 4, and 3 ; that Room may be 12 Feet high, 15 Feet wide, and 20 Feet long: Or that Proportion may be extended to 18 Feet high, 24 Feet wide, and 30 Feet long, which are the same Divisions, and in each of which Feet and Inches are not consider'd as the Divisions by which they are regulated ; but I only use the Term *Feet* and *Inches* as they are more universally practis'd and known, and to shew *what* harmonick Numbers spring from such *Arithmetical Proportions*.

It may perhaps appear an Innovation, as well as Novelty, to introduce in Architecture a Method so different from the common Ideas People have conceiv'd of Building, and which has been an established Rule so long practis'd ; but if Men would impartially divest themselves of such mistaken Principles, which may have misled their Genius, I cannot see what Objection

## 140 LECTURES on

can be made to this Method, *that is*, to prevent its being practis'd. Suppose in the Plan before us, that the Room marked A is the Proportion 4, 3 and 2; the Height is divided into 2 equal Parts, each in Your Terms is called 5 feet; the Breadth is 3 of these Parts, call'd 15 feet, and the Length 4 of those Parts equal to 20 feet, all which amounts only to Proportion 4, 3, 2.

SUPPOSE the Rooms which I have made in the same Plan, &c. are marked B, C, E, F, and G, to be the Cube and half; that is, the Height being 10 feet, the Breadth is 10, and the Length 15 feet; that is, the Cube and half express'd by the Denomination of feet: the Height I divide into 2 equal Parts, the Breadth into 2, and the Length into 3, without Numbers. This Proportion I have in some Places called the Sefquialter.

THE Room marked H is the Proportion 5, 4, and 3, which is form'd by dividing the Height into 3 equal Parts; each is 3 feet 4; the Breadth containing 4 such Parts, is equal to 13 feet 4 inches; and the Length being 5 of those Parts, is 16 feet 8 inches.

THE

THE Room marked D, is the same Proportion as that marked A; but it must be observed, that Room is 12 feet high, which makes it 2 feet higher than the lower Apartment; and in the Chamber Story, the Room over it becomes 2 feet lower than the other Rooms of that Floor. There may be a Passage and Communication to the Stair-cases over the Place marked D, represented by the dotted Line. The Magnitude of this Room is form'd by dividing the Height (12 feet) into 2 equal Parts; each contains 6 feet; the Breadth (being 3 of those Parts) is equal to 18 feet, and the Length (4 of those Parts) is equal to 24 feet, or Proportion 4, 3, and 2.

THE Room N is continued through the Chamber-story and forms the Cube 25 Feet.

THUS I have endeavour'd to demonstrate the *Possibility* of Practising the harmonick Proportions by this Method; and I hope you will receive such an Idea of the Necessity of *Proportions* to be used in *Building*, that their Usefulness will become your Care to improve in and preserve. The *Method* is

T 4

so

so concise; and the *Proportions* are so easily retain'd in the *Memory*, that they will prove an important *Basis* for a young Architect to build his Study on : Rules so easily digested, so extensive, and fitted so exactly to tally with mechanick Numbers, must undoubtedly meet with a Reception equal to their Merit. I shall more particularly shew, in the Course of my Lectures, an Example of a Plan and Profile of each Proportion, whereby you may be convinc'd of the Veracity and Extent of those Proportions, which I have laid down and establish'd as an universal Rule to proceed by.

THE SITUATION of the Design before us, I propose on an Eminence about half a Mile distant from some publick Road, or small Heath, to which I would have only a *Fosse* to separate an Avenue leading from thence to the Building; each side of that Avenue I would plant thick with Under-wood, and always kept so Low, that they might not prevent a Prospect from the House to remote Objects. About the middle I would propose a Canal, or large Fountain, to cross the Avenue; and from thence to the Building, I would have it by a gradual, easy Ascent,

cent, end in a semicircular, amphi-  
theatrical Verdure of Ever-greens, in which  
should be Openings to verdant Walks,  
terminated by some distant Landscape,  
a beautiful Prospect to a fruitful Vale,  
or some remarkable Object.

THE Avenue I would propose a Ver-  
dure, therefore the Approach to the House  
should be through the Wood on one  
side that Avenue; those Woods to be  
cut through with Serpentine Walks,  
either regularly prun'd, or luxuriantly  
Shooting their Branches in a wild Dis-  
order; the Paths strew'd with Sand, to  
render them more easy to walk on.  
From these agreeable Retreats, some more  
open Walks should invite the pensive  
Wanderer to roam, in which little  
Temples, or Seats for Ease, Repast,  
or Retirement should be placed to ter-  
minate the View. The Offices should  
be extended in a right Line from the  
Building Northwards (proposing the  
Front a South Aspect) join'd only by  
a Corridore, and so low built, that the  
Vista's from the Chamber Windows  
might not be prevented being seen at  
the Ends of the House.

THE Back or North Front should  
have an opening to some Vista, be-  
tween



tween which and the House should be an Amphitheater 160 Feet square, and environ'd with lofty Groves on each side, to keep off the Keeness of the North Winds. I would have few Vista's cut in them; for the Winds passing through, would render the Back Front less pleasant to reside in. I would in some Places, at certain Distances, erect some Statue, or little Building, to retire to in the Summer's Heat, or in the Coolness of an Evening's pleasing Shade, when all Nature is calm, and undisturb'd, and the Mind unbent from Cares or Fatigue. Such Retreats would give unspeakable Raptures to a Soul capable to pursue a Tract of Thought in Infinity of Space, or contemplating upon the immense Wonders of the Universe.

THE Distance from any Town I would have at least a Mile, and, if possible, one Vista to it from the *Venetian* Window in the Room marked N, making that the chief Reception for Company; and by having your Windows to the *South* and *East* Fronts, you would render that Room less cold in the Winter. The Kitchen I would place at the *East* End of the House, and to be built low in a Fosse. The Access

cells to the House, for common Uses, should be under the Level of the Ground, and by the Stair-cases marked L; so the Ground-floor of the House would be no way incommoded by Servants, but wholly appropriated to the Uses of the Master, or Principal of the Family.

If the Situation would admit, I should choose some Verdant Hill to the *North* Front, at about a Mile Distance, to shelter the Grove on that side the House, lying as it were one third of a Circle round, that would render the Residence there in the Winter more tolerable; the *South* Front being all open, and the Prospect no way interrupted, joyn'd with the little Walks and Avenues cut through the Woods, would be always agreeable.

Thus far with respect to the Situation it self. The BUILDING which I would erect on that *Spot*, is the Plan and Profile before us, compos'd of 3 Cubes; the middle one is forty-two feet, and the contiguous ones 28 feet 6 inches each. As the Offices are not join'd to the House, but by a Corridore about 30 feet in length, to render the Building independant of them, I would

would propose Vaults under the Stables, which should be Groyn'd, and placed to the *West* Side the House. On the *East* should be the Kitchen, below the Surface of the Ground, and a Laundry over it, level with the Ground, the Use of the Corridore being only to make a Fence from the Garden on the *North* Front, and the common Approach to the House. The applying *Rooms* to proper Uses, is best done by those who consider the Wants for which Families require them, according to the Number or Quality of the Inhabitants; therefore I shall shew only the Form, and Magnitude, and Manner of completing those Rooms, leaving their Uses to those who best can apply them according to the Necessities which are most requisite.

BEFORE I proceed to more particular Observations, it may not be improper to *explain* how the *Proportions* affect the Imagination. The EXTERNAL Parts of a Building, at a proper Distance, are circumscribed by the *Retina* of the Eye; the INTERNAL Parts *terminate* the Rays of Sight, which strike on the *Retina*, and circumscribe them within the Focus or Point of Sight, by a *Reverberation* of Rays. So that all external Objects are more distinctly and more intelligibly view'd

view'd and consider'd, by having a proper Distance assign'd for the Point of Sight. Whereas, the internal Parts being so near the Eye, it must roll or travel from Place to Place, and the IDEAS of the Objects *only* can affect the Senses. This General Observation will be of Use to shew, that the IDEA of an *external* Cube, being strongly seated in the *Imagination*, by only viewing two Sides of an *internal* one, the same IDEA will render such Proportion equally agreeable. It is to be further understood, that all Cube Rooms, exceeding 28 or 30 Feet, requiring the Parts to be proportion'd to it self, must render them difficult to be comprehended at one view; therefore an 18 Feet Cube for Rooms is preferable to one of 40 Feet. And all *internal* Parts do not so immediately strike the Idea as an *external* one, where a proper Distance can be had to take in all its Parts at one View; but if a Cube be view'd in Profile, not having any Depth to be conceiv'd at the same Instant, an internal Cube may equally affect the Eye, since at the entrance into a Room, the one Side and Height may be comprehended the same as a Building thus view'd in *Profile*, which is only then consider'd as a Square or Unifon.

It

It is in a great measure *Custom* which familiarizes us to *Proportion*. A double Square for Doors or Windows, or any other Proportion with which we are more immediately acquainted, have so strong a Propension in the Mind, that any *Parallelogram*, a little different from it more or less, may easily be discern'd. For the truth of this Assertion, I appeal to yourselves, whether the Eye is not capable of so nice a Distinction. I mention this only to shew, that the *first Principles* of the Art being firmly seated in the Mind, it will be difficult to impose a Proportion on you, that is different from such which have been familiar to you in the *Theory*, or *Practice* of the ART. I hope I need no Apology for this Digression, because it seems of some Importance to settle *Proportion*, which is the first Principle of ARCHITECTURE.

THE PLAN of the Ground-floor and *Profile* before us consists of 3 connected Cubes, which extend 99 Feet. The Building I propose to be of Bricks, except the *Strings*, *Cornice*, and *Blocking-course* round the Building, and the middle Part, which is *rusticated*, the *Pedestal* of the *Order*, the *Pilasters* and *Columns* of the *Portico*, the *Entablature*, and the  
Bal-

*Ballustrades* round the House, these, and the *Festoons* of Fruit, &c. I propose of Stone. The *Festoons* I introduc'd to keep an equal Margin round the Windows, which are so placed, that they are capable of receiving an elegant *Dress*: and by continuing the STRING round the Building, the breadth of the *Impost*, or *Cornice* of the PEDESTAL to the *Columns*, &c. of the *Portico*, it becomes a proper Bearing for the Architraves to stand on. The *Dress* I purposely omitted, that at your leisure Hours you might see what Effect a proper *Decoration* of *Ornaments* to those *Windows* would have, and what *Elegance* it would introduce by being regularly applied.

THE Internal part I would finish in the MODERN *Taste*; the Entrance or Room A, and that marked D, to be done with *Stucco*, or finishing, on the Walls, as likewise those Rooms marked E, and F; all the rest of the Rooms of that Floor to be boarded; the *Cornice* of all the Rooms done in *Plaster*, and enrich'd. The Room D, to have an *Entablature* of the *Ionick* Order, and the Cieling ornamented with Pannels, divided by a small Moulding; and the Center some *trite Ornament* of *Mosaick* Work, &c. The Doors and Windows to have a proper

proper Dress in Wood, and such Rooms as are Wainscotted, to have Marble Chimney-pieces, and Ornaments over them, and the other Portland or other Stone, intending a plain *Dado* or *Pedestal* Part to continue round each Room, the Height to the Bottom of the Window-Sills.

THE Room N, I propose to be Cov'd, and half those upper Windows being stopt up, as is shewn by the dotted Line cross the Window in the Profile, that Teer will become Attick or square Windows under the Cornice, which continues round the Bottom of the Cove, which I would enrich with *Octogon Pannels*, and Flowers in them, and a Frame embellish'd with Ornaments at the top of the Cove next the Ceiling. This Room I would wainscot to the Under-side of the Cornice. The *Venetian* Window, I propose to be of the *Ionick Order*, to be set on the *Pedestal*, which goeth round the Room; the Pillasters of the Window to be 11 Inches Diameter, the middle Openings to be 5 Feet, the small ones 2 Feet 6, each; so that the middle Window will be 2 Diameters high to the Cornice, and, with the Semi-circle above it, will be 2 Diameters and a half. The out-  
side

side PILASTERS to be of Stone, the inside of Wood, The PIERS between the Windows, and those between the Doors, and on each side the *Venetian* Window, I would elegantly decorate. The Chimney-piece of *Statuary Marble*; and over the Doors and lower Windows, Festoons of Fruit, &c. to preserve a *Keeping* in the Design.

THE two Stair-cases marked L, are designed to be of Stone, and to be continued from the lower Offices to the ATTICK Story. That marked I, to be of Wood, and to go no higher than the Chambers over the Rooms marked G, H, K. On the Ground-floor I would have a Communication to the Rooms marked C, and G, in the thickness of the Walls at the Passage M, which may be had under the Stairs adjoining to those leading to the lower Offices.

THE Chamber-floor to be wainscoted throughout to receive Hangings. The Floors laid with clean Deals; the Cornices of Plaister, and the Chimney-pieces of Marble, decorated with few Ornaments. The Cielings all plain, and only an *Ovolo*, or *Architrave*, with Cornice and Frieze, &c. over the Doors, and an *Architrave* round the Windows.

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THE



THE *Attick* Story of the middle Cube, I propose to be wainscoted throughout in a plain manner; common boarded Flooring; and the Chimney-pieces to be of Stone, suitable to the Plainness of the Rooms. The rest of the internal Finishing will naturally occur to the Memory of the ingenious *Theorist*, so to apply to make it analagous to the whole Design. I should observe, that over the Hall at A, and over D, will be PARTITIONS, whereby that Room will become a Passage to the PORTICO, as may be better conceiv'd by the dotted Lines representing those Partitions on the Chamber-floor; the rest may more intelligibly be explain'd by the *Plan* and *Profile*, those requiring no other Description than what a *Delineation* or *Draught* can express.

As Objections may arise to the Universality of the Proportion of the Cube, when it is extended beyond certain Limits, both to *external* and *internal* Parts of Building, and likewise to the Proportion 3, 2, and 1, when it is not circumscrib'd within some allotted Extent; I intend, in my 12th *Lecture*, in describing the *Analogy* of that *Proportion*, to explain their Limits and Uses. There are many noble Designs which may be form'd  
from

from both, to rescue those from Censure, which I shall demonstrate in some other Lecture.

THE Task I have undertaken, may have underwent severe Criticisms from Men sway'd by their own *Productions*; but if I can gain a *favourable Opinion* from the *few* whose *Taste* and *Genius* distinguish Things without Partiality, I esteem my self *happy*. I have purposely started out of the *common Road*, not only as an *Amusement* to my self, but to exercise the Pens of abler Artists; or at least to set them to the Practice of something which may bear the Test of Examination. If all *Arts* and *Sciences* are confin'd by *stated Rules*, ARCHITECTURE is one of the Number; and if not the *noblest*, may be esteem'd one of the most *extensive* in *Fancy* and *Design*: It requires a nice Judgment, to compose the Parts of which it consists into a regular Symetry. DESIGNING requires a *noble* and *fruitful* Imagination, a *true Taste* of *Beauty*, a *Fertility* of *Invention*, a *Delicacy* of *Fancy*, to diversify and preserve the *Analogy* of the Design within that Mediocrity, that renders PROPORTION always the Delight and Pleasure of the Eye, either in its plain, natural Simplicity, or when it is more elegantly deck'd with Ornaments.

IF I fall infinitely short of that nice Taste, I shall, however, *attempt* something which RULES will produce, and where I have erred, shall esteem it a Favour to be guided by some better *Genius*. I might perhaps (*with Assistance*) rescue ARCHITECTURE from that Oblivion in which it has long continued; and those Impediments and Difficulties which are to be met with in Designing, may be compriz'd in a *few* plain and easy Rules, fitted to every Capacity. To attain the knowledge of so *noble* and *useful* an ART, are the sincere Wishes of,

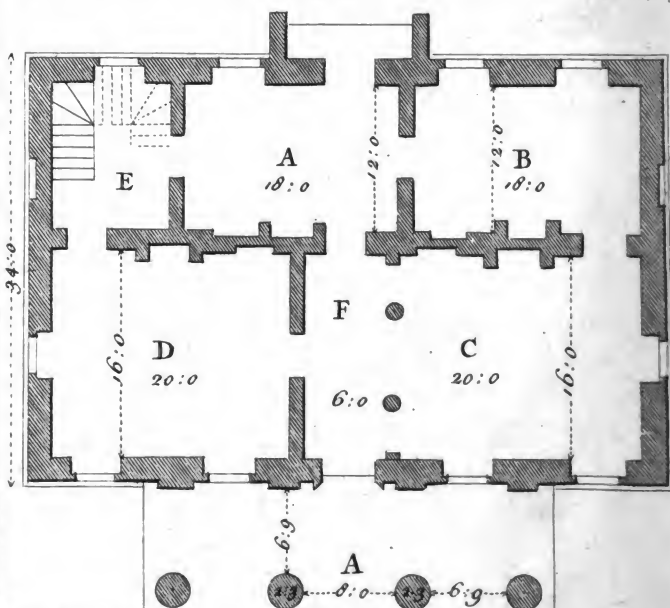
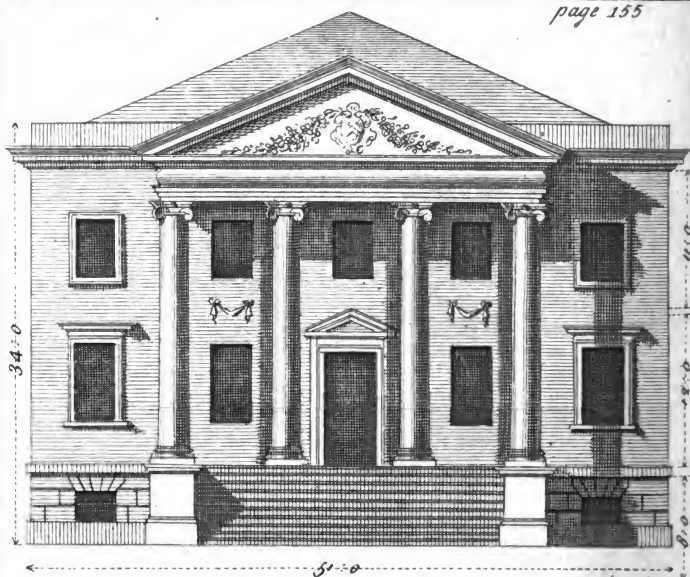
GENTLEMEN,

*Your humble Servant, &c.*

*Read to the Society*  
Sept. 30. 1734.

LECTURE





Rob. Morris inv. et del.

Torus sculp.



# LECTURE

## The T E N T H.

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GENTLEMEN,

**I**N my *last Lecture*, it may be remembred, that I propos'd to divide the *external* and *internal* Parts of a Building by harmonick Proportions, not using Feet and Inches for the *Divisions*, but by the analogous *Principles* contain'd in my first Part, for which I have compos'd different Designs of each Proportion. This before us being one appropriated to the *Cube and half*, its *Height* is 34 feet, *Breadth* or *Depth* 34 feet, and the *Length* or *Front* 51 feet.

I THINK it necessary, the better to explain the Uses of such *harmonick Divisions*, to shew how the same Divisions of the same Design may be *enlarg'd* or *contracted*, and still preserve all the Pro-

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portions

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portions in the *Plan*, as well as the *Profile* of the Design, so that each shall have all its Parts analogous to it self. I shall therefore *suppose* a Building to be 60 feet Front, and to be the Proportion *Cube and half*, and the *Plan* and *Profile* the same as this Design before us. If the Front be 60 feet, and to be the *Cube and half*, the Depth will consequently be 40 feet, and the Height 40. This is found harmonically, by dividing the Front into 3 equal Parts, and allow 2 of them to the Depth of the Building, and 2 to the Height. Or by Arithmetical Proportions, if 51 feet give 34, the Depth, &c. what will 60 feet give for a supposed Depth, &c. which Operation is stated by the common *Rule of Three*, thus :

$$\begin{array}{r}
 \text{ft.} \quad \text{ft.} \quad \text{ft.} \\
 \text{If } 51 : 34 : 60 \\
 \qquad \qquad \qquad 34 \\
 \hline
 \qquad \qquad \qquad \text{f.} \\
 51)2040(40 \text{ the Depth requir'd,} \\
 \quad 204 \phantom{0} \\
 \hline
 \quad \phantom{0} 0
 \end{array}$$

IF

If the same Design is required to be contracted, the Front to be 45 feet, the same Rules will produce 30 feet, the Depth and Height of the Building.

|        |     |     |                    |
|--------|-----|-----|--------------------|
| ft.    | ft. | ft. |                    |
| For if | 51  | :   | 34                 |
|        |     | :   | 45                 |
|        |     |     | 34                 |
|        |     |     | -----              |
|        |     |     | 180                |
|        |     |     | 135                |
|        |     |     | -----              |
|        |     |     | ft.                |
|        | 51  | )   | 1530               |
|        |     |     | (30 the Depth, &c. |
|        |     |     | 153                |
|        |     |     | -----              |
|        |     |     | 0                  |
|        |     |     | (requir'd.         |

THUS far with relation to the increasing and decreasing the Proportions both *external* and *internal*, by *Harmonick* and *Aritbmetical* Proportions. I shall now shew the *Analogy* of all the Parts to the Whole. And first for the Proportion of Rooms.—In the Profile before us, at the End mark'd 8 : 12 : 11, you find the principal Floor 12 ft. high. Therefore, if 51 ft. require 12 ft. for the Height of the Story, 60 ft. will require 14 ft. 1 Inch and a half, which is the Height of the supposed Story, found by the preceding Rules. The Height of the Story being

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ing thus augmented, the Length and Breadth of each Room will be proportionally enlarg'd. Therefore I shall suppose the same Design, both *enlarg'd* and *contracted*, and each Front and Rooms, &c. will appear thus explain'd.

|                          | ft. long. | ft. high.  | f. deep |
|--------------------------|-----------|------------|---------|
| If the Standard Front be | 51        | and 34     | and 34  |
| The supposed Front       | 60        | will be 40 | and 40  |
| And the supposed Front   | 45        | will be 30 | and 30  |

So the internal Parts, to the 51 ft. Front, if the Height of the Story be 12 ft.

To the 60 ft. Front, the Height will be 14 :  $1\frac{1}{2}$

To the 45 ft. Front, the Height will be 10 : 7

In the Rooms A and B in the Plan.

|                    | ft.                  | ft long.                | ft. broad.              | ft. high. |
|--------------------|----------------------|-------------------------|-------------------------|-----------|
| If the 51 Front be | 18 : 0               | and 12 : 0              | and 12 : 0              |           |
| The 60 f. Front is | 21 : 2               | and 14 : $1\frac{1}{2}$ | and 14 : $1\frac{1}{2}$ |           |
| The 45 f. Front is | 15 : $10\frac{1}{2}$ | and 10 : 7              | and 10 : 7              |           |

Again, in the Rooms D and C in the Front of the Plan.

|                     | ft.                 | ft. long.                     | ft.                   | ft. high. |
|---------------------|---------------------|-------------------------------|-----------------------|-----------|
| If the 51 Front be  | 20 : 0              | & breadth 16 : 0              | & 12 : 0              |           |
| The 60 ft. Front is | 23 : $6\frac{1}{2}$ | & breadth 18 : 10             | & 14 : $1\frac{1}{2}$ |           |
| The 45 ft. Front is | 17 : 8              | & breadth 14 : $1\frac{1}{2}$ | & 10 : 7              |           |

THE *Harmonick* Terms for the Proportion of these Rooms, are A and B, the *Cube and half*; and those marked C and D, are the Proportion 5, 4, and 3. The same Rules are universal for the *increasing* or *diminishing* all the other Proportions.

THIS

THIS little VILLA is design'd for a small Family, or one of moderate Fortune, where only Retirement it self is wanted by the Inhabitant; therefore I would choofe to have it situate on the Ascent of a Hill, in a fruitful and open Country, with the Descent either to the East or South, the Back-part environ'd with Hills to the North. Some of the Lands below I would have cultivated, others *wild* and *woody*: nor should it be far from some *River*, and the better if it were *navigable*. The *Champaign* lying low to the Front, I would dispose into Grounds for *Pasture* and *Tillage*. Some of the neighbouring Hills I would have *naked*, and *without* Trees, that they might serve for Corn only, which grows in a Soil moderately dry and rich, better than in steep or low Grounds. Some of the other Hills should be planted with Timber Trees necessary for Buildings, or Utensils for Agriculture. And if possible, to render the Situation still more agreeable, I would wish for constant *Rivulets* of Water, to descend from those Hills upon the Meadows; or to be convey'd by Aqueducts to the Service and beautifying the Garden, by Fountains or Cascades, &c. These should be the *Decorations* and *Ornaments* of the *Villa*.  
 The

The Water would serve for the Use of *Cattle*, grazing in the *Fields* or *Thickets*, and a thousand other Conveniences which Families require. As there are a multitude of Domestick Wants in a Country Seat, therefore as much Judgment, or more, is required in the Choice of a Situation for a *Villa*, than a House for a City, and more Knowledge of Nature is necessary in the Application for the Services of a *Villa*.

BUILDINGS in Cities, erected for publick Convenience, Religion, or Diversions, are more magnificent, and require the knowledge of some particular things not necessary to the Country Architect; yet the latter, in the Care he is obliged to take in providing for all things dependant upon Agriculture, for the Convenience and Uses of such little *Common-wealths*, whose Provisions are to be supply'd within its own Territories, not furnish'd perhaps by Markets, or Neighbours, as in Cities; I say, the Country ARCHITECT has as many different things to meet with, and surmount, that are not needful to be known by the *Architect* who is wholly employ'd in Buildings in the City; and few *Architects*, perhaps, have a nice and distinguishing Judgment for both.

As

As the Design before us is small, the little Garden I would plant should be proportion'd, and Care should be taken so to lay out and dispose of the several Parts, that the neighbouring Hills, the *Rivulets*, the *Woods* and little *Buildings* interspers'd in various Avenues, &c. to give the more agreeable and entertaining Views, should render the Spot a kind of *agreeable Disorder*, or *artful Confusion*; so that by shifting from Scene to Scene, and by serpentine or winding Paths, one should, as it were, accidentally fall upon some remarkably beautiful Prospect, or other pleasing Object.

THE Offices which I propose for *Stabling* and Agriculture, &c. should be remote from the House, which I would, as it were, surround with the Garden, except at one End; there I would propose the publick or common Access under the Room mark'd D, which should lead by a Passage to Stairs at the West End of the Building. These lower Offices I would propose for the Use of Servants; the Kitchen, and other Apartments for the Use of the House, should be placed between the Stables and House at the West End, not joining to either. The Offices under Ground should be  
pav'd.

pav'd with Stone, and appropriated to such Uses which should be thought most proper by the Inhabitant.

THE principal Floor being elevated about 6 Feet from the Surface of the Garden, will make the Apartment to the South and East Parts extremely pleasant ; as it is on the Ascent of a Hill ; and the Garden disposed in the manner I describ'd, would render it a kind of little PARADISE. The Room marked C, I propose to be the Entrance of the South Front, divided by a Screen of Columns, at F. This Room I propose to be done with *Stucco*, the Cornice plaister'd, and Ceiling enrich'd with Ornaments ; the Walls decorated with Festoons of Fruit and Flowers, and the Windows and Doors dress'd with proper Ornaments, and all the Mouldings, where necessary, to be carv'd. The Rooms marked D, B, and A, to be finish'd with Wainscot to the Walls, the Cornices enrich'd with Plaister, and such necessary Ornaments introduc'd, as shall be appropriated to the Services to which those Rooms shall be design'd. All the Floors to be of clean Deal ; the Chimney-pieces to be ornamented in proportion to the manner of finishing the Rooms ; and the Stair-case

to

to be of Stone from the lower Offices to the *Attick* Story.

THE *Attick*, or Chamber Story, I propose to be wainscoted throughout with plain Wainscot, or prepar'd for Hangings; the Cornices of Wood, and the Cielings plain; the Floors to be of second clean Deals, and the Chimney-pieces plain, or ornamented only with a few Enrichments. There will be a convenient Beauty in the disposing the Room over C, either by placing an Alcove over the Screen of Columns, or by putting it at the other End of the Room, that that over B might become a Dressing Room to it. And if the Wants of the Family requir'd it, Lodging Rooms for Servants might be made in the Roof, and a proper *Illumination* might be had to them by little Sky-lights, or secondary Lights from the Stairs; observing only, that the Floors of these Garrers should be laid with Plaister, for a Reason I have elsewhere assign'd.

THE *external* Part I propose all of Stone, if the Country near would produce it; or, as I propos'd it, near some navigable River, to render Land Carriage less expensive, it might, perhaps, be easily attain'd. If so, I would propose the Basement Story, in the *Dado* Part of the *Pedestal*, between the *Plinth* and *String*,  
to

to be *ruficated* all round. This would give a Grandeur and Airinefs to the principal Front, and render the back Front likewise very agreeable, which being to the North, I would have it entirely plain, without Drefs or Ornament to the Doors or Windows.

I F. Stone could not be fo conveniently had, I would have only the Columns, and the Steps and *external* Drefs of it, and the other Parts of fuch Bricks as were the Produce of the Country; if Red, the better, becaufe the blank Parts are fmall, and few in number; and that would be the means of adding a particular Beauty to fuch Parts as are Stone. The Reason which I affign, that I omit the Drefs of the Windows in the Portico, is, that the Parts are lefs crowded, and it gives an Awfulnefs and Solemnity to the Spot or Situation. If you would give yourfelves the trouble to perufe the 68th and 69th Pages of my firft Part, yourfelves will difcover how I have appropriated my Defign to that Description.

It may be obferv'd, that the *ſame analogous Proportions* are preferv'd in the Margins, or Spaces round the Windows, and by adding theſe Feſtoons, the ſame is preferv'd through the whole Front, and the

the Windows of the back Front are so placed, that the same keeping of Design is continued through all the Parts of which it is composed. At the Ends I have added Windows for the sake of the Prospect; but in the Room over C, if your Alcove is placed there, a Blank must be made where the Vacuity now is, each Room having sufficient Light without 'em.

THIS Plan, if required, might be alter'd on the principal Floor, by making at the East End only one Room, which should be from the North to the South Front; and would be 30 feet long, and 20 feet wide, by making it range with the Screen of Columns, and placing a *Venetian* Window in the middle of the East End; but then that Room must be 15 ft. high, which Proportion would be 6, 4, and 3, and the Attick Story from being 11 ft. would be only 8 ft. high over that Room; but two Lodging Rooms the same Length and Breadth, as those now are, might be had with this Alteration.

IF by thus altering the Plan, that Room might be had on the principal Floor, it might be objected, that such a Room would be too large for the Magnitude of the Building; and if the Quality of the Inhabitant sometimes required



required so spacious a Place for Entertainment, then consequently Convenience on that Floor would be wanted; and instead of supplying those wants with more Rooms, one of those, which now are, would be omitted. It is certain, for a Family such Alteration is not preferable to the Plan before us; but for a single Person, not over-fond of Company, one studious, and who prefer'd a contemplative, *rural Life*, with few Attendants, to one Generally esteem'd *fashionable* and gay, by converting that Room to a LIBRARY, in which, perhaps, might be his chief Residence; to such a Person, that Alteration would be more useful, and the other 2 Rooms of this Floor might be sufficient for his Use or Convenience. I would then propose to make the 2 *North* Windows of that Room *Blanks*, that in Winter it might be Warmer; the back Parlour, markt A, being proper for a Summer Eating-room, in which the VISTA would be continued the same as it now is.

THERE are doubtless many things may have escap'd my Notice, which had been more needful for me to *Explain*; but as things occur to my Memory, which I think of some Importance,

## ARCHITECTURE. 167

portance, you will, I hope, excuse Prolixity ; too much cannot be said, if it tends only to render an Undertaking intelligible and universally useful ; and there are some branches, in many Arts that require extensive Demonstrations to be comprehended. However, if I have not wearied your Attention, I am careful of being too tedious : Therefore till another, or a more favourable Opportunity offers, I beg leave at present to esteem my self,

*Your humble Servant, &c.*

*Read to the Society*

*Octob. 14. 1734.*

T LECTURE



# LECTURE

## The ELEVENTH.

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**I**N Two preceding Lectures I have endeavour'd, in a particular manner, to describe the Beauties of two different Situations. The Design before us affords a Delicacy of Taste and Invention to appropriate a Spot analogous to its Decoration. It is of the *Corinthian Order*, dress'd with such *Ornaments* and *Garnishing* as are necessary to perfect the Composition. Here the ARCHITECT must be supply'd by an artificial Scene to entertain his Fancy : He must, by agreeable Images of rural Beauties, furnish himself with what is *useful*, and adapted to the design, so joining ART and NATURE together to render the Scene the more delightful.

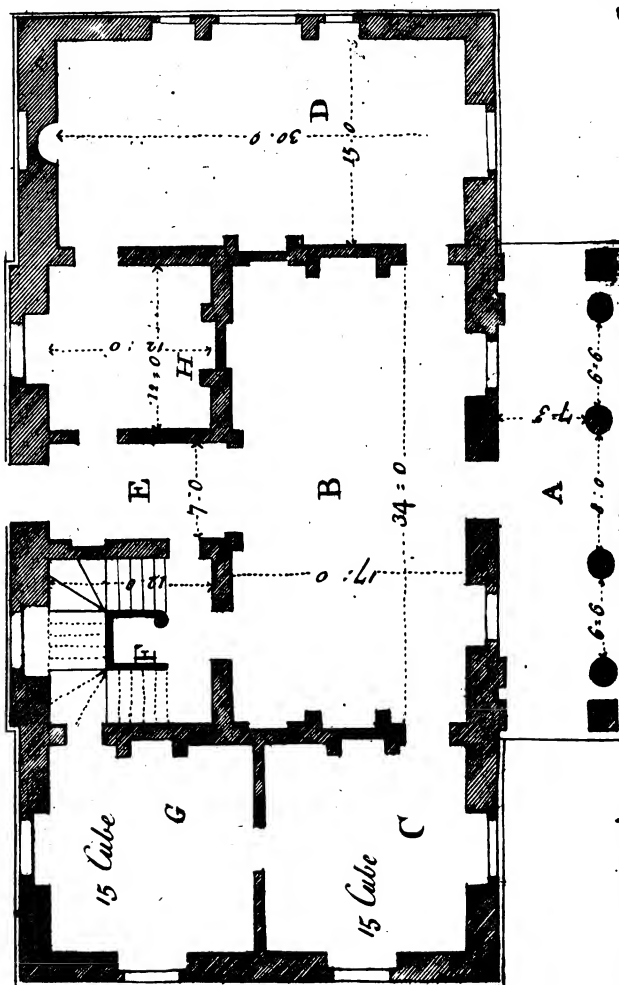
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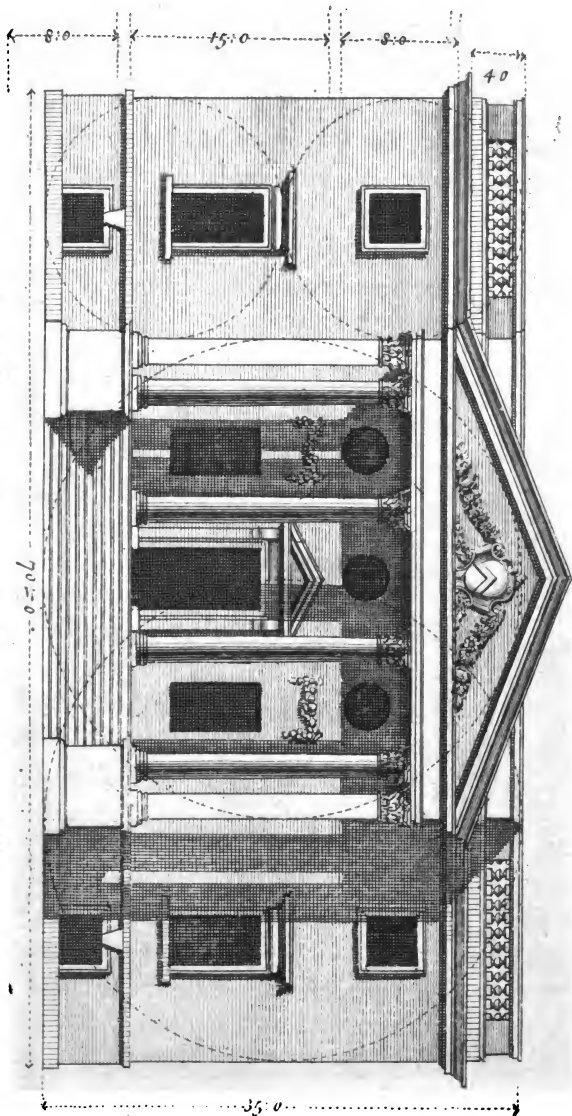


The double Cube

Fig. 3

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## ARCHITECTURE. 169

THE first thing to be consider'd, is the Use to which this Design is propos'd to be apply'd, it being intended for Pleasure as well as a Retirement in some Garden, or agreeable decorated Spot. Few Conveniencies are wanting, therefore I suppose it only as a Summer-house a little remote from some noble *Villa*; and the Building I would place in some *Avenue* leading thereto. It is HERE in the *cooler Hours* of Reflection, a Man might retire, to contemplate the important *Themes* of *Human Life*; reclude from gay Fancies, he might secrete himself, not envying the more External Grandeur of Power, or despising the humbler, or lower Class of Beings, to whom Providence or Fortune hath been less auspicious. In the silent Recesses of Life, are more *noble* and *felicitous* Ideas, and which more immediately concern our Attention.

A Man, whose *Genius* leads him to study ARCHITECTURE, may see in the Vicissitudes and Changes it has undergone, what Revolutions of opposing Fates have been in the WORLD; how the *Materials*, which have been apply'd to Erect *noble* and *magnificent Buildings*, *Palaces*, &c. to immortalize the *Name* of the Founder, are now crumb-

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ling



ling into Dust, and perhaps a few Years more may totally annihilate them: How many populous Cities, which once were the Nursery of *Learning*, and the Residence of succeeding Kings, are now no more, and even their Names scarce *transmitted* to us. By such Reflections as these he may be led to consider, that those innumerable flourishing and populous Cities, now *celebrated* throughout the World, may undergo the same Change. He may also consider himself as the Offspring of Parents which he can trace but a few *Generations* back; and in which no remarkable Transaction performed by them, worthy of notice, has been transmitted to him, to render their *Existence* here of any particular Moment or Regard. He may contemplate the Numbers of succeeding Parents, between himself and the first Being of Human Species from whom he sprung, and look forward, and consider the infinite Numbers which may derive their Being from himself, and all to undergo the same Change. I say, such Reflections as these, are always a noble and pleasing *Theme* for a speculative Mind.

If

If from *Arts and Sciences*, such entertaining Thoughts may spring, let the GEOGRAPHER trace the various Beauties of this *Terrene Sphere* ; let his Imagination roll from *Pole to Pole*, and view all the diversifying Scenes of *Hills, Vallies, Rivers, Woods, Desarts, Mountains, and Seas*, that he can meet with in Travelling from place to place ; let him consider the *Uses, Beauty, and Design* of such a Multiplicity of different Scenes, for *Warmth, Shade, Heat, and Cold*, in the several Climates ; let him trace the *Vestigies* of *once-venerable Cities*, the Foundations of *Troy and Carthage*, or the fam'd *Hellice and Burice*, memorable Cities on the *Helleſpont*, whose Foot-steps are no more, or no where to be found ; let him search for the Places of many *Islands*, once the Residence of *innumerable* Inhabitants, either long since sunk in the *fathomless Ocean*, or chang'd their Stations ; let him trace the pathless Face of the *Deep*, which hath tempted *Millions* to seek their *Fate* at the Bottom of the *Unmeasurable Abyss*. I say, let the GEOGRAPHER expand his *Ideas* from one *Chain* of Thought to another, and he will find what Pleasures are attendant upon a *Calm* undisturb'd Retirement ;

what *Tranquillity* and *Sereneness* of Temper he may possess, thus secreted in these silent Retreats of Solitude.

IF the Earth with its *Beauties*, so familiar to us, are capable of such noble and improving Thoughts, let the *Astronomer* expand his Ideas into the endless and unknown Tracks of *infinite Space*; what *Wisdom* and *Harmony* appears in the Contrivance, and how wonderful such Multitudes of *Planets* perform their Revolutions at their appointed *Periods* round their allotted *Orbs*; how the Earth's *Eliptick*-Motion surprizingly diversifies the Seasons of the Year, by its *Diurnal* and *Annual* Revolutions, and how each Part, in some measure, at certain Seasons, from *Pole* to *Pole*, enjoys the Sun's *benevolent Beams* of Light and Warmth; how each Planet performs its allotted Course at *instantaneous Periods*, and to the several purposes for which *Providence* design'd them; and all subservient to some noble Ends, of *Wisdom*, and *Omnipotency*. When he pursues this Thought still farther, and conceives Millions of unseen Worlds, which may be dispersed through this endless Scene of Space; when he can still rush forward, and suppose each of those Worlds capable

ble of Inhabitants, and all serving for the same wise and *providential* Ends, with Amazement he can no longer pursue the tractless Thought, only have fresh *Reasons* to adore that BEING who first form'd them, and is pleas'd to make our Existence here of some Moment or Concern with the rest of the *Creation*.

REFLECTIONS of this kind, are the Growth of Retirement to a contemplative *Genius*; and the *Design* before us, decorated with those Embellishments, requires a Situation capable of raising such elevated *Ideas*. I shall therefore suppose it erected in the *Center* of a *Wood*, and each Front to have an Opening or *Vista* only the breadth of the Building. If it were on a little Ascent it would be better, and more advantageous for Prospect. Not far remote from the back Front I would choose a *Rivulet* or *Canal*. The Woods I would plant with low *Trees* or *Bushes*, with little *Vista's* and private Walks; and those left wild and unprun'd, that at Noon-day they should receive only Light enough to distinguish the *Blaze* of *Day* from *Evening Shade*, there the Chorus of the *Birds* would afford new Pleasures, and by dispersing Seats, &c. among

mong the *Walks*, would greatly add to its Beauty.

WITHOUT the Woods I would have *Meadows* strew'd with various Flowers, which being dispers'd among those of the *Earth's* natural Produce, would render the Glebe more delightful to behold. If the *River* ran through it, and was disposed into multitudes of little Streams, 'twould still add to its Beauty, and make the Ground *more fertile*; 'twould diversify the Scene, and by a Chain of rising Hills beyond, to terminate the View, would make a beautiful Landscape. In one part of the Wood I propose a *Grotto*, and in it a *Bath*. This should be placed in the most unfrequented Part, surrounded with *Ever-greens*, and the Access to it by a declining spiral Walk, to terminate in a circular *Theatre*, about 10 ft. below the Surface of the Garden. This, by *subterranean* Aqueducts, might be supply'd by the Rivulet, and *artificially* dispers'd among *craggy, mossy Rocks*, form'd by a skilful Hand, which would be a pleasing Scene to gratify the curious Eye and Ear. The little murmuring Rills of Water, trickling down in disorder'd Streams, would create a kind of *melancholly musical Tone*, not altogether unpleasant.

STILL

STILL to render the Retirement complete, the Walks should be a continued *Verdure*, and so planted, that some of them should always afford perpetual Shade. The *timorous Hare* should be protected from the Artifice of *ensnaring Men*; and the Birds possess perpetual *Freedom* without *Annoyance*. Here a *Mind* innocently employ'd by its *Starts* and *Sallies*, and its Excursions into *philosophic Depths*, by a Propensity to Solitude, always meets with Entertainment. Every Sprig of *Grass* may afford a multitude of fine Thoughts, to employ the Imagination; and by a Genius turn'd to *microscopical Speculations*, a Way is open'd to entertain the Fancy with unbounded Reflections.

THE Proportion of the Design before us is the *Double Cube*; a Proportion whose Graces please in Profile, but when a Depth is supposed to it, is not always so agreeable. However, the Parts of which this is *composed*, discloses to us a Neatness and Simplicity in its Decoration, and are diversify'd in a certain Analogy peculiar to themselves; and the Dress preserves such a Chain of Similitude, as renders it pleasing and various.

THE

THE Front is 70 ft. Length, and its Height as well as Depth is 35 ft. The Great Order extends in Breadth 35 ft. or one half of the Front, which is composed of 4 Columns, and 2 extream insulate Pillasters at the Angle of the *Portico*, 2 ft. Diameter, of the *Corinthian* Order. The remaining 35 ft. or half Front, is left to the 2 Sides next the *Portico*. So that the Height being 35 ft. each of the Sides are 17 ft. 6 Inches, or a double Square. The Parts being represented by dotted Circles, require no farther *Demonstration*.

THE *Portico* I have placed on a Pedestal, whose Height is one fourth of the whole Order, placing at the End a double Pedestal for the *insulate Pillaster* and *Column*. This Pedestal is brought forward from the Range of Columns to the Range of the Steps, after the *Antique manner*; and, by placing a Statue on each, they would give a noble Contrast to the Design. The Dress between the Columns I have been very sparing in, not using any Ornament round the Windows, because that will fill the intermediate Spaces between the Columns too much; and to preserve the general Keeping, I have added a Festoon of Fruit, to keep the Margins

## ARCHITECTURE. 177

gins or Spaces round the Windows, in the Intercolumniation, as equal as Conveniency would permit.

As some have rais'd the following Objections, I propose to answer them, to shew that those little seeming *Errors* are discover'd by my self, and thought no way material to amend.

OBJECTION the 1st. *In the Cornice of the 2 preceeding Designs, I have not drawn Modillions, nor in this Profile of the Corinthian Order.*

ANSWER'D. In such *minute* Drawings, as the particular Form of the Members cannot be preserv'd, so the introducing *Dentils*, or *Modillions*, would confuse the Parts in which they are plac'd, and remain unintelligible. It is sufficient that the General Proportions are just, and the minuter may be conceiv'd in the Mind. I am not about teaching a Knowledge of the five *Orders* of *Architecture*, supposing those to be well understood by you; but it is the *Art* of Designing, which I am endeavouring to cultivate and improve. I am not curious whether a Cornice of the *Ionick* Order, or the *Corinthian*, be grac'd with *Dentils* or  
M-



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*Modillions*, for external Uses; those things being not essentially necessary in the Art of Designing, the Harmony of the whole being the Care of the Architect to preserve.

OBJECTION the 2d. *The Designs themselves are small, and internal Conveniencies have been my least care to introduce.*

ANSWERED. As to the Magnitude of the Designs themselves, I am to observe they may be extended to what Length your selves would propose, by changing the Proportion with Breaks, after the manner of my Design, *Lecture the 13th*; where you see the Proportion I have laid down closely follow'd, the Parts are analogous to its self, and renders that Range truly HARMONICK, as may be observ'd in my Description of it. And if a large extended Design was to be introduc'd, in so small a Volume as this Work is compriz'd, the several Parts of a magnificent Building would remain unintelligible.

OBJECTION the 3d. *In the Proportions which I have laid down as absolute, I have forgot the Conveniencies of Designing, and have sacrific'd Use to Proportion,*

*portion, because I would have all the internal parts, as well as external, tally with my Rules.*

ANSWER'D. The Uses of a Building which is design'd only for an Amusement, are uncertain, therefore cannot be properly appropriated to every Want, or hit every Taste : It is sufficient that they are commodious, and serve such Purposes as I intend them. Those who are pleased to give themselves the trouble of examining, will find they may be converted to more Uses than one, and serve many Purposes, which would be too tedious for me to describe. As to what relates to the Proportions which I have limited, and since their Publication have been objected to, I here beg the favour of such Objector to read seriously the 131st Page of the first Part of my Lectures, which I think a satisfactory Answer to all Objections of this kind, as well as those I have now endeavour'd to clear, for the better removing such Impediments which may prevent young Students in *Architecture* from having recourse to *Rules* in the Performance of Designing. But to return.

THE

THE other three Fronts I would only dress the Windows of with an *Architrave*, *Freeze* and *Cornice*; and in the *North* or back Front have Pediments over the Windows of the principal Floor, opening the Pedestal which is above the Cornice that goeth round the Building, for Ballusters over the Windows, as in the Front. The Materials I propose all of Stone; the Covering of the Roof, of *Lead*, intending it flat on the Top, and the Stairs to lead to the same for the advantage of a remote Prospect.

THE Plan consists of five Rooms on the principal Floor, the Entrance being through the Portico at A. The common Entrance to the lower Apartments being under the half Pace of the Portico. The Room markt B is a double Cube, being 34 ft. long, 17 ft. wide, 17 ft. high, the rest of the Story being only 15 ft. the Floor of the Attick Story over this Room becomes two ft. higher, making those Rooms only 6 ft. high, as a *Metzamina*, or half Story, the rest of the Attick being 8 ft. in the Clear. The Rooms markt C and G, are Cubes of 15 ft. The Room D, a double Cube of 30 ft. long, 15 ft. wide, and 15 ft. high. The Room marked H, a Cube of 12 ft. to the top

top of the Cornice, above which I propose a Cove one fourth of that Height; which 3 ft. makes that Room the same height as the other. The Passage markt E, I propose 7 ft. wide, and to be Groyn'd. The Stair-case markt F, 12 ft. <sup>•</sup>sq. of Stone or Marble, and to lead from the lower Offices to the Attick Story.

THE lower Offices have Light sufficient for any Uses; and lying but a small part below the Surface of the Ground, the Floors may be boarded, and Walls wainscoted in such Rooms as may be thought necessary; and those Rooms under B and D, may, if required, be each of them divided into two, and illuminated at the End and North Front, &c.

THE principal Floor to be embellish'd with Ornaments in the most beautiful manner; proposing the Room B to have an Entablature of the *Corinthian* Order, fully enrich'd; the Opening to the Passage of the North Front to have a *Venetian* Arch, consisting of detach'd Columns and Pillasters in Couplets, as in the Portico, 10 Inches Diameter, to support an enrich'd Arch, the same Periphery as the Groyns; the other Doors dress'd with proper Ornaments; the Chimney-pieces

pieces appropriated to the same manner of Finishing; all the Mouldings, where necessary, to be carv'd; the Ceiling divided into Pannels, with Ornaments, &c. answerable to the rest of the Room.

THE Room marked D, being at the East End, I propose to be a Library. The Cornice as the Room B, of the *Corinthian* Order. I propose the same Pedestals which support the Pillasters of the *Venetian* Window, to continue round the Room; the remaining Height to the Cornice to be filled up with Shelves for Books, ornamenting the Doors and Windows as in the Room B. The Ceiling deck'd with Ornaments of Fruit and Flowers, and the Chimney-piece suited to the manner of finishing a Room appropriated to that Use. The circular Part, or Head of the *Venetian* Window, to be a Blank, otherwise the Cornice of the Room would be broken or interrupted from continuing round.

THE Attick Story intended for Lodging Rooms, to what Purposes may be thought most useful, I would propose to finish in a plain manner throughout: The Chimney-pieces, and Ornaments to Doors and Windows, few, and appropriated

priated more to *Use*. than *Decoration*: Or such Rooms which are most convenient, might be prepared for Hangings with Tapestry, or other Furniture. The Stairs leading to the Flat on the House should be over the Passage marked E.

FROM an Eminence thus situate many agreeable Views might be had to distant Objects, which would afford an amusing Entertainment in the Serenity of a declining Sun and calm Air, when Nature seems lull'd into a kind of pleasing REVERIE. As this Profile before us is to terminate a Walk in a Garden, I propose, in the Course of these *Lectures*, to delineate some little Temple or Building, with its Plan, suited to this purpose. The ancient *Romans* planted their Plots in this *rural* manner; and their *Temples*, dedicated to their peculiar GODS, were dispersed among the *Groves* and *Woods*, which Art or Nature had made, with *Vistas* to them, or some more secret Approach, to which, for the most part, *Devotion* or *Luxury* led the Master of the *Villa* to retire to. In such Retreats the *Roman* Senators were wont to taste the Pleasures of Retirement, to unbend their Minds from the more weighty Concerns of their Commonwealth; till, perhaps, satiated with too

U

great

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great an Excess of Indolence, and *ennervated* by Luxury, succeeding Tyrants claim'd a Superiority over them, and by degrees they lost their LIBERTY.—Then their noble *Palaces*, their magnificent and beautiful *Villa's*, their delicious Situations were wrested from them, and at length the whole Empire became a Seat of *wild Desolation*.

YET still their Arts survive, and we may boast of many noble Genius's with suitable Fortunes, who are Copiers of those fam'd *Romans*; *Cato* and *Pliny*, *Varro* and *Columella*, with their *Villa's* decorated in as *beautiful*, *rural*, or *magnificent* a manner as those of the Ancients.—But choice of different Situations must much diversify the intended Pile.

—To some, perhaps, the pleasing silent VALE,  
Where silver Streams in Eddies glide along :  
Or else the vernal Bloom, or rip'ning Glebe,  
Or fertile Fields, with yellow Harvests crown'd,  
Seems most engaging to the wand'ring Eye.

—Others delight in long extended Views,  
A noble Prospect to some Champain Plain ;

A

## ARCHITECTURE. 185

*A rising Summit, or declining Vale,  
Half scatter'd o'er with Flocks of fleecy Sheep.  
Others, perhaps, a rude and barren Heath.*

*--The Gloom of Woods, and solemn lofty Groves,  
The calm Recesses of a pensive Mind,  
May be the happy Choice of one whose Thoughts  
No empty Glares of Pageantry possess ;  
Or false, fugacious Vanities allure.*

*Another's Eye the craggy Cliff may please,  
The shocking Precipice, or uncouth Wild ;  
Where Nature no prolific Seed hath shed,  
Beyond the Art of Man to cultivate,  
A kind of pleasing, dreadful, rugged Scene.*

*The boist'rous Billows of tempestuous Seas,  
May more invite another's changing Mind,  
To trace the rolling Vessel in its Course,  
Rais'd on the Summit of the foaming Surge,  
Now mounting on a Wave, whose tow'ring Height  
Another Wave succeeding, sinks as low.  
Alternate Scenes, like these, hath Nature made,  
And diff'rent Sentiments do each possess :  
What one delights, may be another's Pain.*

*All these the Architect must study well ;  
Be well inform'd, what Nature most requires  
To fit and tally Art in all these Scenes ;  
To give a Greatness to the opening Lawn,*

U 2

*And*



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*And pleasing Softness to the rural Glade.  
This is the Art's Perfection well to know ;  
And he who traceth best the diff'rent Climes,  
And most resembles Nature, in his Choice  
Of Just Proportion, Garnishing, and Dress,  
Appropriates Art most nobly to its Use.*

*A Genius. born to penetrate so far,  
To trace the intricate Labyrinths of Art,  
And teach Mankind t'improve the glorious  
Thought,  
Let ev'ry Artist celebrate his Fame ;  
His Practice be Example to us All,  
And He doth best, that best can IMITATE.*

GENTLEMEN, I hope you will excuse this Digression, when you consider, that *Art and Science* in general is the End for which this Society was establish'd to improve in. But particularly, as it is ARCHITECTURE, when I reflect on the *Beauty* of its *Rules*, I am led into a kind of poetick Rhapsody ; the continuance of which, as Time and Opportunity offers, will be a Pleasure to me to communicate. Till then, I shall continue with due Respect,

*Your devoted Servant, &c.*

*Read to the Society  
Nov. 11. 1734.*


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# LECTURE

The TWELFTH.

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Y Three preceding Designs, of this second part of my *Lectures*, have been dispos'd chiefly to a *Rural* and *Pleasant* Soil, I propose in this to change the Scene for one more *Robust* and *Rustick*, a Design capable of sustaining the Storms and tempestuous Inclemency of the Elements; it being plain, and the *Plan* fitted by its Strength and Contrivance to withstand the Injuries of Winds and Weather; and its Proportion apt to apply to such durable Uses, being the Proportion 3, 2, and 1; the Length is 90 feet, the Depth 60 feet, and Height 30 feet.

U 3

THIS

THIS Design I would propose to place on the Summit of a HILL, a long-extended Vale to the principal Front; and not far remote from the declining Verge of the HILL, I would have a navigable River: WINDSOR, or GREENWICH, or RICHMOND, or SHOOTER'S-HILL, afford a Scene something like this; and the Profile before us being intended for the chief Front, I would propose it for a *South Aspect* to the *Vale* below, bounded only by the declining *Horison*.

WITH the Variety of Woods and Meadows, and different Views of the River, I would wish to have some beautifully situated *Villa's*, interspersed with little *Villages* and *Towns*; in the Scene some Views should be to Pastures cover'd with Flocks of Sheep, from thence to Fields of Corn, in which the ripening Harvests would afford Delight to the Eye.

*Another Spot, a verdant gradual Rise  
To Orchards laden with delicious Fruits,  
At once to gratify the Eye and Taste.—  
Another Scene, to Groups of lofty Pines,  
The Entrance to some pleasing, solemn Grove,  
Where*



Robt Morris inv. & delin.

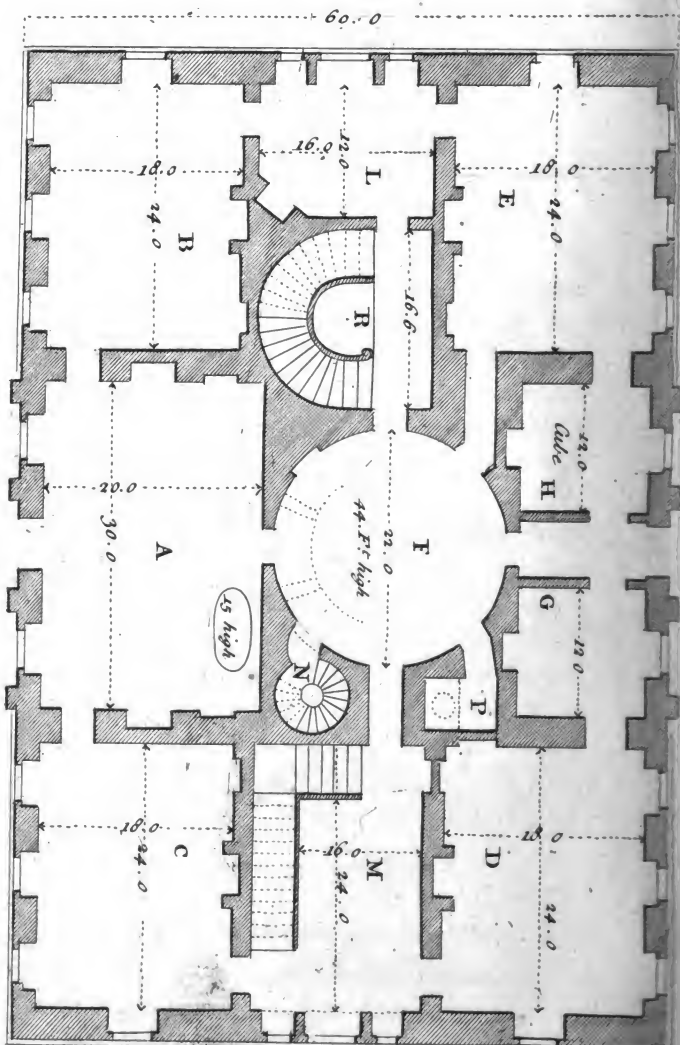
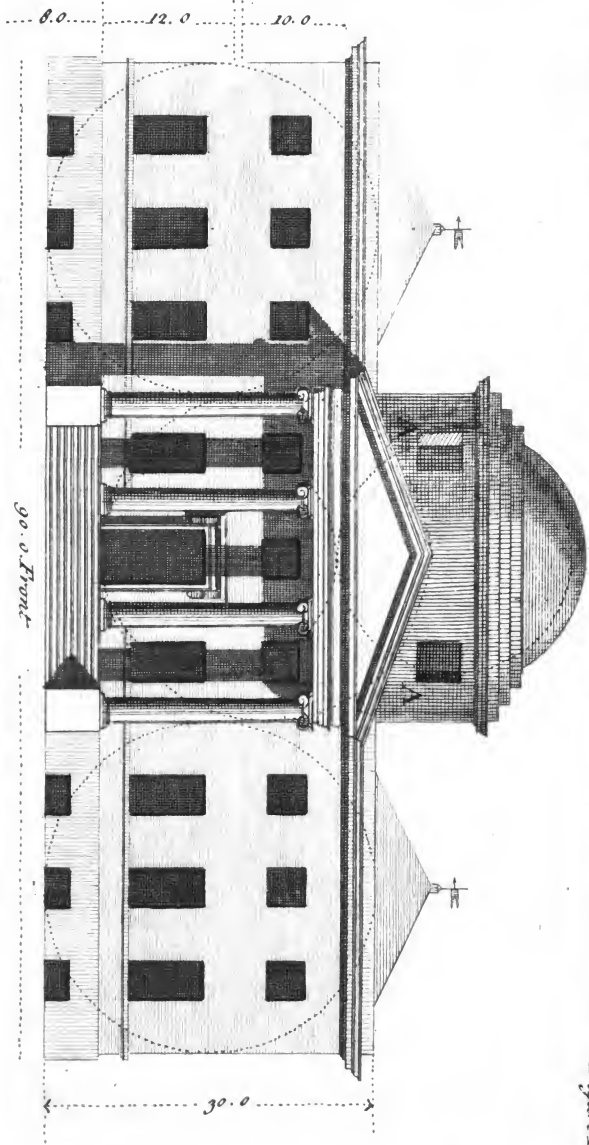


Figure 1

98. Cube South

Rob: Morris: Arch: et delin.

Figure F



90.0 Front



W. Cole Sculp



## ARCHITECTURE. 189

*Where Demi-Deities are feign'd to dwell :  
Such as the BARD, who sung Achilles' Fame,  
Describ'd : Or MARO, of Anchises' Race ;  
Or sweet-tongu'd OVID, in a softer Strain.  
Such Groves, whose lofty Tops aspiring rise,  
And shade in solemn Form the winding Paths ;  
Those still Retreats, that sooth the pensive Mind,  
Retir'd secretly in an Ev'ning Shade,  
Or when the Rays of Light refresh the Morn.*

*Another View the circling River shews,  
On which the Vessels, with their swelling Sails,  
Among the Woods and Gardens seem to move,  
Now in a Line direct, obliquely now,  
Or Line Eliptick, as the Streams, or Wind,  
Or rolling Tide directs 'em in their Course.  
Such a Variety of rural Scenes,  
Mingled with little Villages and Towns,  
Would fill the Eye with Wonder and Delight.*

I WOULD have no Garden laid out by Art, but such only as Nature it self produc'd ; the Vale below would afford all the Pleasures of a distant View. I would have a little Spot sufficient to serve the House with Fruits and Herbage.

*Nature would there require no large Parterre,  
No swelling Terrace, nor the Tulip Bed ;*



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No Grove to ramble in, in Summer's Shade,  
Nor Spot luxuriant, deck'd with lavish Art.  
Northward I'd choose a wild, or barren Heath;  
Or else a Prospect to some distant Sea;  
Or else a Group of vast and steepy Hills,  
Whose craggy Summits, with their distant Views,  
Alternate Risings, and their diff'rent Shades,  
Shifting in various Forms from Hill to Hill,  
A wild, romantick Prospect would create.

When Summer's verdant Fields do grace the  
Plain  
With wanton Flocks of Sheep, within the Meads,  
In sportive Motions, kind of mystic Dance,  
And other rural Scenes to fill the Eye,  
There centers all the Pleasures of the Vale.  
Not so, when Winter's Storms the North invades,  
When the wild Waters dash resisting Rocks,  
And bear the tatter'd Vessels to the Shore:  
Nor Rigging, Tackle, Sails, or Mast you see;  
The Winds resistless Force have torn away,  
And drove the shiver'd Wreck upon the Beach,  
Must be a moving, sympathizing Scene.

If to the shocking Precipice you look,  
And view the hideous Landscape, or the Cliffs  
Where barren Wildness reigns—No pleasing Path  
T'invite the wand'ring Traveller to attempt  
A Place unknown, or an untrodden Wild,

No

## ARCHITECTURE. 191

*No Cultivation to allure the Eye,  
 No verdant Spot, nor azure Violet Beds,  
 But Wilds, where Birds of Prey delight to dwell,  
 The rav'nous Vulture, or the tow'ring Eagle :  
 Or Residence, perhaps, of savage Beasts,  
 Only to propagate and breed their Young  
 Within the Caverns of their craggy Sides,  
 Where the most Hardy would not be allur'd  
 By Profit, or by Nature's Choice to climb ;  
 Such Scenes are DERBY-PEAK, or DOVER'S-  
 CLIFF.*

FROM one end of a *Building*, thus form'd in *Plan*, and a *Situation*, a View half rural, the other half a rocky *Wild*, or open to the Sea, would afford a delightful Variety, a pleasant Landscape. And from each Front, so many different Views might be had, in every Season of the Year, as would render the Spot always agreeable ; and if Business required a Residence in some populous *Town* or *City*, half that Pleasure might be there enjoy'd, by having several Views of those Landscapes at different Seasons, taken by a skilful Hand, at the *Villa* itself. This would renew the Felicity, to see a beautiful Vale with all the fineness of a *rural Scene* from one Front, and a *Building* capable of

of being erected at such a Point of Sight ; and to the other, the well-designed Picture would disclose to View, all the Horrors of *romantick Precipices*, or the Inclemency of the Elements in a *Tempest*.

THERE may be an Objection started to this Design, that is, *Making the Front of the Ionick Order, and a Portico to it, and placing it on an Eminence*. I answer, That the Front being to the *South*, or *South-East*, and to so agreeable a Vale below, I thought it more proper than the *Dorick Order*. And to the *Back-front* I propose no Portico ; the whole Building likewise being as plain as it is possible to compose one of this Order, or even the *Dorick*. But then, to add to its Beauty in the Vale, the Portico will afford a majestic Appearance, and render the Building nobler in Aspect, than if it was omitted.

AND as I have in the 69th Page of the first Part observ'd, that the *Ionick Order* is the most applicable to Situations of various Kinds, I hope I have not deviated from those *Rules* which I have all along so strenuously endeavour'd to propagate in the Application of *Proportions* as well as *Designs*, analagous to

## ARCHITECTURE. 193

to certain *Situations* for which a Fabrick is propos'd to be appropriated.

THIS Building is design'd to be erected with Stone, which it is not unlikely such a Spot may produce ; and if it was prepar'd from a *Quarry* some time before it be us'd, that it might harden in the Air, the Building would be less liable to Fractures, especially at the Quoins or Angles in carrying up, than when Stone is used green, just raised from the *Quarries*. The *Venetian* Windows, at the Ends, I propose entirely plain ; and each Front will preserve a regular Affinity, and the internal Parts have those *Proportions* which my preceding Rules have render'd practicable. The Uses must be submitted to such whose Judgment, Wants, or Conveniencies more immediately require them, referring the internal Finishing to the Pleasure of the more judicious Artist.

It may be objected, *That the Dome had been better placed in the Center of the Building from North to South.* I answer, Its Situation does not require it, having no Approach to the House at either End ; and viewing it only in Profile from the two Fronts, cannot be discern'd how the Center of it is situate in  
Depth :

Depth : Besides, one more prevalent Reason, which requires no Demonstration.

THE Entrance at the South Front through the Portico leads to the Room A, whose Proportion is 6, 4, and 3, the Length being 30 ft. the Breadth 20 ft. and Height 15. The rest of the Rooms of this Story being only 12 ft. high, I have made the Back-stairs mark'd N, the Way to the Room over it, which becomes a *Metzanino* of 7 ft. high, and the rest of the Rooms of that Story 10 ft. high in the Clear. The Rooms of the Ground-floor mark'd B, C, D, E, are Proportion 4, 3, and 2 ; the Length 24 ft. Breadth 18 ft. and Height 12 ft. The Room mark'd F, is 22 ft. Diameter, and 44 ft. high ; and the Rooms G and H Cubes of 12 ft. The two Stair-cases marked R and M, propos'd to lead to the Attick Story ; intending that marked R, to go to the lower Offices, and apply'd to the most common Uses, and to be of *Stone*, the other of *Wood*.

THE Place marked P, is intended for a Stool-Room, in which excellent Provision may be made for Conveyance of the Effluvias of the Soil, to prevent Offence. At the circular dotted Line in the  
Room

## ARCHITECTURE. 195

Room F, on the Chamber-floor, I propose a Gallery supported by Brackets, as are represented there, to have a Communication from each Stair-case to all the Apartments of that Story, intending the Plan of that Floor the same as the Principal.

THE Front consists of 3 Parts equally divided for the Length, and one of those 3 Parts make the Height; they are represented by the dotted Circles in the Profile, in which it may be observ'd the Portico is circumscribed by one of them; and the 2 sides being equal to the Portico, makes the whole three equal Squares. The Roof is intended to be fram'd with a Vally round the Dome, in order to give Light to the Room markt F in the Plan, the Windows being plac'd at A A in the Profile, and to have 4 of them in Number, this Room having no other Vacuity whereby it may be Illuminated. The 2 small dotted *Circles* which meet in the Freeze of the Entablature of the Portico, circumscrib'd within the internal Height of the Dome, are only to represent the Height of that Room of two Diameters. The rest of the Profile explains it self,  
or

or may be better comprehended by examining the Plan.

It may be remembred, that in my Ninth Lecture I propos'd to assign some allotted *Proportion*, not to be exceeded in the Application, to use either *external* or *internal*, and this Proportion 3, 2, and 1, as far as they relate to Building. The Reasons which induce me to adhere to such restricted Proportions, are founded on the following Observations. An Object whose *Proportion*, *Bulk*, or *Magnitude* cannot be strictly circumscrib'd by the Eye at one View, the whole of that Object cannot be comprehended in the Idea ; nor are the Parts so easily retain'd in the Memory, when the Chain of Proportion is broke by introducing a new Idea, which it must receive when the Eye is forced to travel from Object to Object, to circumscribe all its Parts. Therefore the Point of Sight, or proper Center to view all Buildings in GENERAL, is, where the Eye can at one View see the Extent of Length and Height, which is to be circumscrib'd by the Eye in the *Focus*, or *Point of Convergence* ; then the separate Parts. As, suppose a *Portico*, or other *distinct Breaking*, which composeth the general Keeping of the Design, these are to be

## ARCHITECTURE. 197

be view'd at a nearer Approach, and at such a Point only where the Eye can take in such Parts as are to be view'd, according to the General Building, in proportion to the *Altitude* or Extent of the Object. But, to examine the *Correctness* of the Particular Members, the *Neatness*, *Beauty*, and *Spirit* of its Ornaments, the Eye must still advance nearer to such a Point where the Rays are not reverberated on the *Retina* of the Eye, but unite in one Point of Convergence, like the Rays of Light in the *Focus* of a Burning-Glass, which unite at a Point determinable by its *Radius*.

It will not be improper to observe here, that the same Distance required to view the Profile of a Cube, or any other Proportion assign'd, will be the Point of View to a Square in a compound Profile. *Here Note*, That a *Building* by it self, independent of other Proportions, such as the Cube, the Cube and half, the Double Cube, &c. has also the Depth to be consider'd in its Composition; and that is dependent on the Proportion of its Length. But in a compound Profile, where the Face of the Building is extended to 5 or 600 ft. the DEPTH is not to be supposed as a necessary Proportion to that General Design;



fig; therefore the Cube is then call'd a *Square*, the Cube and half is call'd the *Square* and half, and the Double Cube is only suppos'd a Double *Square* independent of Depth.

SUPPOSE, for Example, that a Building is 700 ft. Length, its Proportions are then to be compounded of such Parts as will introduce a *Nobleness* and *Variety* in its Composition; which, by Breakings into the *Square*, the *Square and half*, *Double Square*, &c. to preserve such General Proportions, and by changing the *Dress*, or *Modus* of the Design, renders that Gracefulness requir'd to form a Design of such Extent. And no Building, exceeding 140 ft. in Length, without Breaking for the preserving such Proportion, can ever appear *beautiful*; and each Part must have an Affinity to the whole, and yet be independently agreeable.—*And note*, all such Proportions are to be view'd for their own particular Graces at a proper Point of Sight, determinable by its own Rules, which you may see by the Design in my next Lecture. But when they are consider'd as a Part of the whole Composition, they are then suppos'd only proper Parts of the whole Range, in which *each* is to be suppos'd dependent upon the Point of *View*, where  
the

the *Focus*, or *Retina* of the Eye can circumscribe an Object 700 ft. Length, which is sometimes suppos'd at a Point where the Length makes the Extream Rays to the Eye an equilateral Triangle, each Angle then becoming Acute, and of 60 Degrees.

GENTLEMEN, I have extended this Discourse farther than at first I propos'd, that I might better inculcate the Idea of PROPORTION, a THING so essentially necessary in the Art of Designing, as well as the Basis of *Arts* and *Sciences*, that without it nothing can be perform'd to give Pleasure to the EYE. And I must at the same time observe, that all Proportions are founded upon *Rules*, and all *Rules* are dependent on *Nature*; and if in Nature there happen some Deviation, some *Luxuriancy* or *Want*, even those PHÆNOMENA may be mostly accounted for. The wanton *Vine* may be directed by Art not to shoot into superfluous Branches, and the more sturdy *Oak* may, by RULES, be directed in its Growth. Both flow from Causes in Nature, and both are to be guided by the skilful Hand of the Artist.

THIS Chain of Thought opens to the Mind a vast Field to entertain the Tongue or Pen of a Philosopher, to plunge into the deep Recesses of Nature.

*To trace the Mazes of this mystick World,  
The Form, the Motion of this terrene Sphere ;  
The secret Springs which guide it in its Course,  
And all the vegetative Tribes preserve ;  
The more amazing Structure of ourselves ;  
Or the celestial Orbs which move above :  
There let the great Imagination dwell,  
And, with the Planets, roll through endless Space.*

PARDON this Deviation from my Subject, I must defer THAT till another Opportunity. I am, during the Interval,

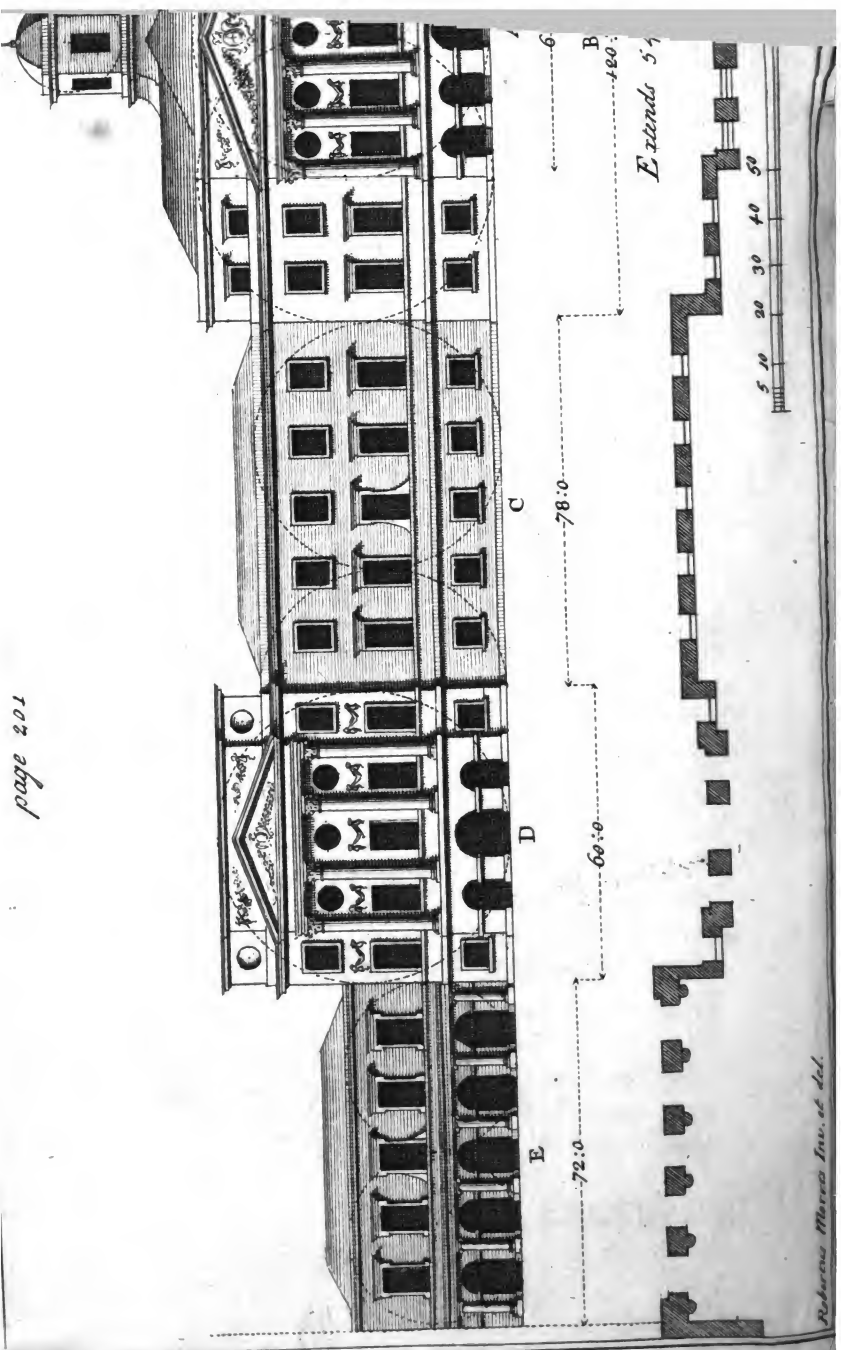
GENTLEMEN,

*Your most humble Servant,*

Read to the Society  
Nov. 25. 1734.

LECTURE





Robt. Morris Inv. of del.



# LECTURE

## The THIRTEENTH.

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GENTLEMEN,



HAT I might better illustrate by Example the Subject of my last Lecture, I have here connected together the Profile of a Building compos'd of different Proportions, which might be extended to a far greater length by continuing the Range in Breaks after the same manner, this being only 540 ft.

THE Center is compos'd of a double Square, extending 120 ft. breaking forward 7 feet, and is mark'd under the Profile with a B; the Height is 60 ft. the Break mark'd A, is half the Length B, that is, 60 ft. and being equal in Height, is compos'd of a Square; the dotted Circles in the Profile are a sufficient Explanation: The Break mark'd C,

X 2

falling

falling back from the Break B, becomes a new Proportion independent of the other two, and is the Square and half, being 78 ft. long and 52 ft. high, and like the middle Part is farther describ'd by the *dotted Circles*. The next Part mark'd D, is the Square of 60 ft. and a Proportion not attach'd to the Part mark'd C, but breaks forward five feet; its Decorations are analogous to the Center. The remaining part of the Range mark'd E, is a double Square, its Length 72 ft. and Height 36, and falls back from D nine feet; the Circles explain its *Analogy*, and its *Decorations* have an Affinity to the whole.

THIS Range might be still continued, by joining the Proportion F, or *three and one*, consisting of three Squares, the Length 120 ft. and the Height 40 ft. and, to terminate the whole Range at each End, I would place a Square of 36 ft. with a small Tower, supported by Columns of the *Corinthian* Order, with a Dome on the Top; the whole would then make an *elegant* and *magnificent* Design, its Length would then be 852 ft. I at first propos'd to delineate the whole Range, and to have added a *General Plan* of the principal Floor; but the minuteness

minuteness of this Volume, the Trouble and Inconvenience of folding Plates, prevented that taking Place; *besides*, the omitting this Part, will doubtless engage some of *you* to try what Effect that Addition will have to the whole Range, and what *Beauty* such Proportions connected together will produce. To analogize and terminate the Range, the *Cupola* on the Center mark'd F, is 22 ft. Diameter, circumscrib'd by a Circle, and is the Proportion *Unison*, or a Square.

THE Dress and *Decoration* of this Profile have been sparingly applied, and have been my least Care to preserve, because the Parts being so minute, cannot represent the Form of the Members; therefore I would have the *Ingenious Theorist* take any of these Proportions alone, and draw 'em to a *large Scale*, preserve the same general *Magnitudes*, then decorate the Parts in the most profuse and luxuriant manner, and see what Effect Ornament has upon an elegant well-proportioned Design. To carry this still further, let him take each Part drawn to *one Scale*, embellish them with Ornaments even to *Lavishness*, and differently, then place them together in the same Order as they are here

X 3 . done,



done, view them join'd in one Range, examine them separate, transpose them to different Places, and in whatever View you place them join'd or separate, I believe every Part will be found to have their peculiar *Graces*: Nay, even void of Decoration or Dress, PROPORTION must infallibly give Pleasure to the Eye.

If you turn back to the 75th Page of my first Part, Lecture the Fifth, you will find the *Cube*, the *Cube and half*, and the *double Cube*, &c. confin'd within certain Limits. I am here to *observe*, as they are not considered as Cubes when *join'd* with other Proportions to constitute a Range, therefore *those* Proportions are not under such Restrictions as they are when only considered as the *Square*, the *Square and half*, and the *double Square*, &c. but each of *these* are under limited Magnitudes: The *Square* in Profile should never exceed 70 ft. the *Square and half* 100 ft. Length, nor the *double Square* 140; the Proportion *three and one* should not exceed 180 ft. Length, &c. These are to be observed when any of them are used as Squares, &c. in a Range to form a long Extent of Design.

THUS

THUS I have endeavoured to explain what I intended in my last *Lecture*; and by thus joining the Proportions, and comparing the same single, you may easily discern the necessity of using them in the Composition of any Design.

THE whole Building I would propose to be of *Stone*, if the Spot I intend it to be erected on would with Convenience permit; to the *Front* should be a large *Canal* or *River*, about half a Mile distant; and on the easy Ascent of a little rising Ground should be placed the *Profile* before us; a *Terrace* or large *Parterre* to be the opening of the whole Front, and with a Declivity to the Verge of the Water.

— From a Building thus fix'd,  
Noble Cascades and Fountains might be form'd,  
Rais'd from the Silver Surface of the Stream,  
In wanton Eddies flowing, circling round  
The verdant Softness of its rising Side—

— Mark, in the Stream, the harmless finny  
Prey,  
Sportive, and fearless of th' alluring Bait,  
~~With~~ silent Motion cut the yielding Flood,

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*And heedless glide along the shallow Shore,  
Untaught by Guile to fear the barbed Hook,  
Securely happy in their Element——*

*This Front, thus open to the fruitful Vale,  
The Ends by Woods and Gardens circumscrib'd,  
Thro' which the Vista's, or more private Walks,  
Form'd by the skillful Artist in Design,  
And well-dispos'd more distant Views to take;  
Or winding Labyrinths, or secret Paths,  
Where scatter'd Temples stand obscurely plac'd  
Within the Limits of some solemn Grove,  
Or Seats to terminate a shady Walk.*

*—— Here the soft Musick of the feather'd  
    Broad,*

*Whose warbling Sonnets echo thro' the Woods,  
In Strains melodious chant from Spray to Spray;  
Some nicely binding up the tender Roots  
In circling Forms, to hold their feeble Young;  
Others sit silent, with uncommon Care,  
To hatch the shapeless Embryo in the Shell;  
Another's Care the callow Young to feed,  
Or by Example lead them on the Wing,  
Teach them thro' tractless Air to shape the  
    Way,  
And shun the Dangers common to them all.*

*—— Here*

—Here Nature likewise lavishly should reign,  
Sport in the Azure, or the verdant Bloom;  
Or blended with the Rose, or Tulip gay,  
Or more obscure, within the Violet Bed,  
Whose Borders Nature variously adorns:  
Or mark the yellow Glebe, or rip'ning Fruit,  
The blushing Peach, or Nectral deeper dy'd.

—All these has Nature made for Use of  
Man,  
His Eye to please, or nicely hit his Taste;  
To mingle Pleasure with his common Cares,  
And make the Toil of Life glide smoother on.  
If Providence so wisely has ordain'd  
The humbler Class of Beings to preserve,  
To cherish all the VEGETATIVE Tribe,  
And lead the ANIMAL by Instinct on,  
And all to serve that nobler Being MAN;  
What Pleasures may from such Retirement flow,  
Where mingled Charms and Contemplation dwell?

Ev'n those who're born to GOVERN Human  
kind,

Might here feel Bliss to captivate the Mind.

As some Walks would be more spacious,  
and Vista's of large Extent, I  
would

would propose in some *Avenue* to place the other Design before us, as a little Retirement for Repast or Ease, so that from each Front in the *Portico's* mark'd A or B, a Shelter might be had, and the Prospect not interrupted. The Design is the Proportion 4, 3, and 2; the Front 60 ft. the Depth 45 ft. and Height 30 ft. The *Portico* is circumscrib'd by a Circle of 30 ft. Diameter; the remaining Parts on each side the *Portico* consist of 15 ft. each, and are 30 ft. high, so that each of these becomes a double Square; the *Columns* and *Pillasters* are two ft. Diameter, the Sub-plinth is one ft. Diameter, which continues round the Building; the *Columns* with their Base and Capitals are 10 Diameters high, the Entablature two Diameters, and the Ballustrade one fifth of the height of the Column. The Fronts A and B are alike; the Height of the first Story is 12 ft. and the upper Rooms 10 ft; the Entrance is through the *Portico* to the Room mark'd C, which is a Cube of 30 ft. and to the Room D on the left, and F on the right of the *Portico*, mark'd A.

THE Room mark'd E, faceth a little Walk, which I propose situate South; the *Portico* A to the West, and the other



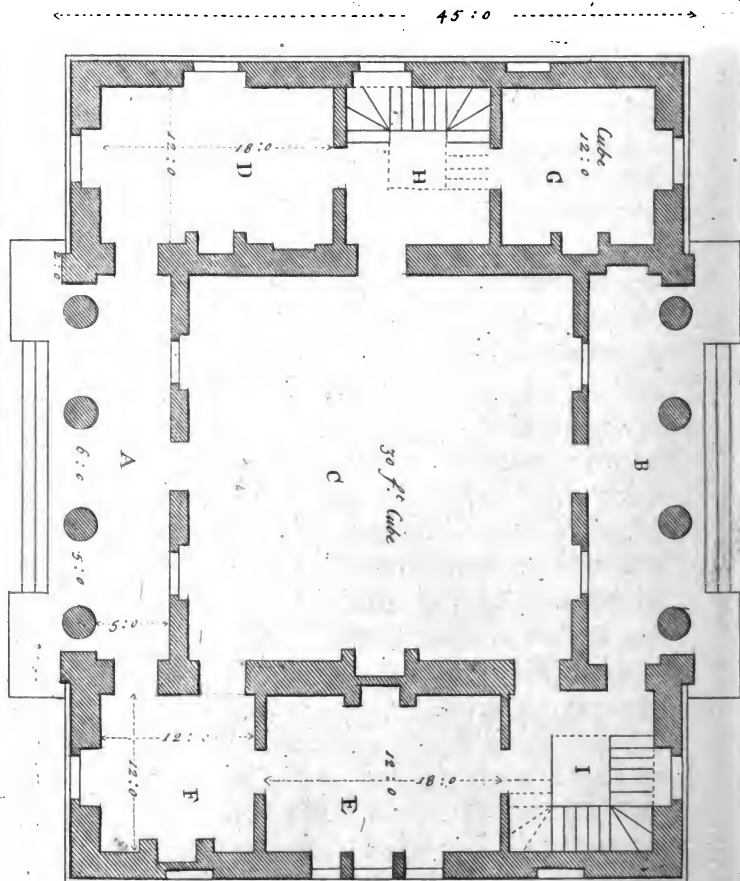
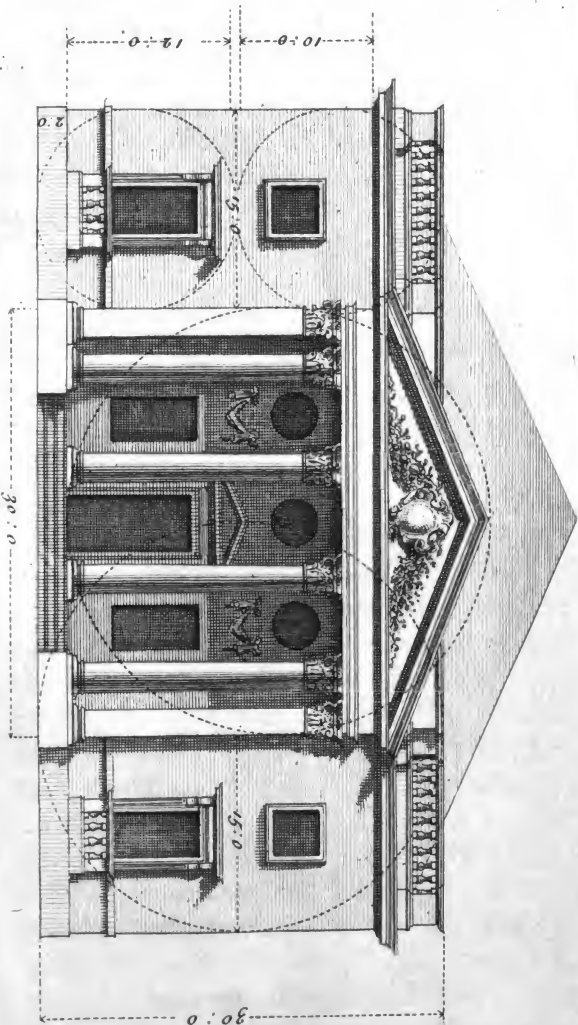


Fig. 6

Proport. 4.34 1/2



page. 209

Robertus Morris inv. et delin.

12 3 4 5 10 15 20 30 40

Tom. sculp.





other Portico to the East. From hence it may be observed, that if the Front of the Villa be a South Aspect, this *Avenue* I propose at the East end of it, then the Portico A faceth the *Parterre* before the House, which by giving that Walk an easy Descent to the *Parterre*, it would command

— *The more remoter Objects to its View :*  
*Perhaps, the distant Group of woody Hills,*  
*Or the more humble Verdure of the Vale ;*  
*The flow'ry Meadows, or the purling Stream,*  
*And all the Beauties of a rural Scene.*

THE Room C, I propose to cove one fifth of its Height, then the circular Windows in the Portico come under the Cornice, which should continue round the Room at the Foot of the Cove, and be of the *Corinthian* Order. The Rooms mark'd E and D are the Cube and half, and those mark'd F and G Cubes of 12 ft. The two Staircases lead to the Attick Story, and the Top of the Building. The finishing of the internal Part I would propose to be in an elegant manner ; the Rooms being regular, would admit of *Dress* and *Decoration* more advantageously than where that Niceness of *Symmetry* is not regarded by the Architect. The external Part I propose

pose to be of Stone, and the covering of the *Roof* of such Materials as would mostly contribute to add Beauty to the Design. The Uses of little *Fa-bricks* erected in the Gardens of some NOBLE *Patron* of Arts are many, as well as the additional *Beauty* it gives to a Spot of Ground dispos'd in a *regular* and well compacted manner: where *Water* can be had easily, and by *Aqueducts* convey it from place to place, from one *Fountain* to another, and serve the Purposes which Gardens require for *Use* as well as *Beauty*, must render a *Villa* an endless *Delight* to the Inhabitants, a *Pleasure* and *Felicity* which a contemplative Genius can be said truly to possess.

TEMPLES, SEATS, GROTTOS, &c. the *Embellishment* and Decoration of Gardens, should have a nice Affinity with NATURE.

*The silent Groves require a little Pile,  
Not deck'd with Lavishness, nor yet too grave,  
The middle Path's the safest way to please.  
Not so the Op'ning to some distant View,  
The Vista, or the Pleasure-Gardens grace;  
There let the Dress Profuseness border on,  
Be wanton like the Spot, with Flowers or Fruit,  
To*

## ARCHITECTURE. 211

*To fill and decorate the proper Voids,  
And sympathize with Nature and the Glebe.*

*The murm'ring Streams, which Grotto's  
mostly grace,  
The Moss, the Shells, the Sea's productive Store,  
The calcin'd Mass in rude Variety,  
Require a Sameness to th' external Part :  
The Dorick Pillar's massy Strength supply,  
Its well robusted Form, with Rusticks mixt,  
Cut by the skilful Artift into Shape.  
The frozen Ificles resembled, form,  
The Sea-green Weed, the Plain or Scallop'd Shell.*

*— Thus ev'ry Spot a various Shape assumes,  
To garnish or diversify the Scene.  
The lively THIS, in THAT the solemn grave,  
Not much unlike the various Scenes of Life :  
The Gaiety of Youth's the lively Glebe,  
The graver Spot's the Verge of Age and Death.*

*My Friends, — could Custom be shook off  
that Yoke of Art,  
Where, blinded Fancy guides the sickly Eye,  
Rules and directs the vain, the weakly Mind,  
And leads the wandring Thought from Maze to  
Maze ;  
Could greater Genius's assert the Right,  
The Beauty, Use, Extent, of NATURE'S LAWS,  
Trace*

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*Trace well the unerring Rules which she directs,  
And glory falser Custom to disdain ;*

*Then might we hope the mystick Art to  
find,  
And joy in being Patterns to Mankind.*

As I am convinced that some of  
You have well considered the Necessity  
of adhering to RULES ; I am at the  
same time persuaded, many who have  
despised them will find an unerring  
TRUTH diffus'd through all its *Glare*  
of Beauty, and will (I doubt not) be as  
strenuous to assert the Pleasures which  
are the Result of practising them, as I do,  
who am, with all due Respect,

GENTLEMEN,

*Yours, &c.*

Read to the Society,  
Dec. 16, 1734.

LECTURE



# LECTURE

## The F O U R T E E N T H.

---

**I**N Five preceding *Lectures* of this *Second Part*, have been on Examples of the *Proportions* which I have laid down in the First; in this I have delineated a *Plan* and *Profile* of each. They consist of the CUBE, page the 139; the CUBE and half, Page the 155; the DOUBLE CUBE, Page the 169; the Proportion 3, 2, and 1, Page the 188, the Proportion 4, 3, and 2, Page the 208. The Proportion 5, 4, and 3, is in the first Part, pag. 124. There remains now only the Example before us, which is Fig. I. which is the Proportion 6, 4, and 3, to compleat the Title I at first affixed to these Lectures, of which I have been so strictly observant, that your *serious* perusal of them will convince you what Care I have taken to preserve the Rules I have all along *recommended* to you

you for your Choice in the Composition of *Designing*, whether acceptable to the World, I am uncertain. However it be, if there are no more Blemishes than the *Novelty* of those Rules to prevent their progress, I have happily succeeded in the Task I had voluntarily undertaken for your Amusement. SITUATION has likewise been consider'd as a necessary Branch of Architecture, for the skilful Designer to appropriate those Proportions to suitable and proper Uses. The last Design was fitted to a Sempervernal Spot, *this* before us is more aptly decorated to sustain the corroding Quality of the Elements. The Length of the Front is 80 ft. the Depth 53 ft. 4 Inches; and the Height 40 ft. equal to the Proportion 6, 4, and 3.

THE Length of the Front I have divided into four equal Parts; the Height into two of those 4 Parts. The middle Part breaks forward to receive the Order above, and consists of two of those four Parts in Breadth, and being equal in Height, becomes a Square, which is represented by the *dotted Circle* that is inscrib'd within the Square; and the two Sides, consisting of one of those Parts in Breadth, and two in Height, forms each a double Square; those are likewise





Fig. F.

53:4

*Roberta Morris undelatin*

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*Stim. Judge's*

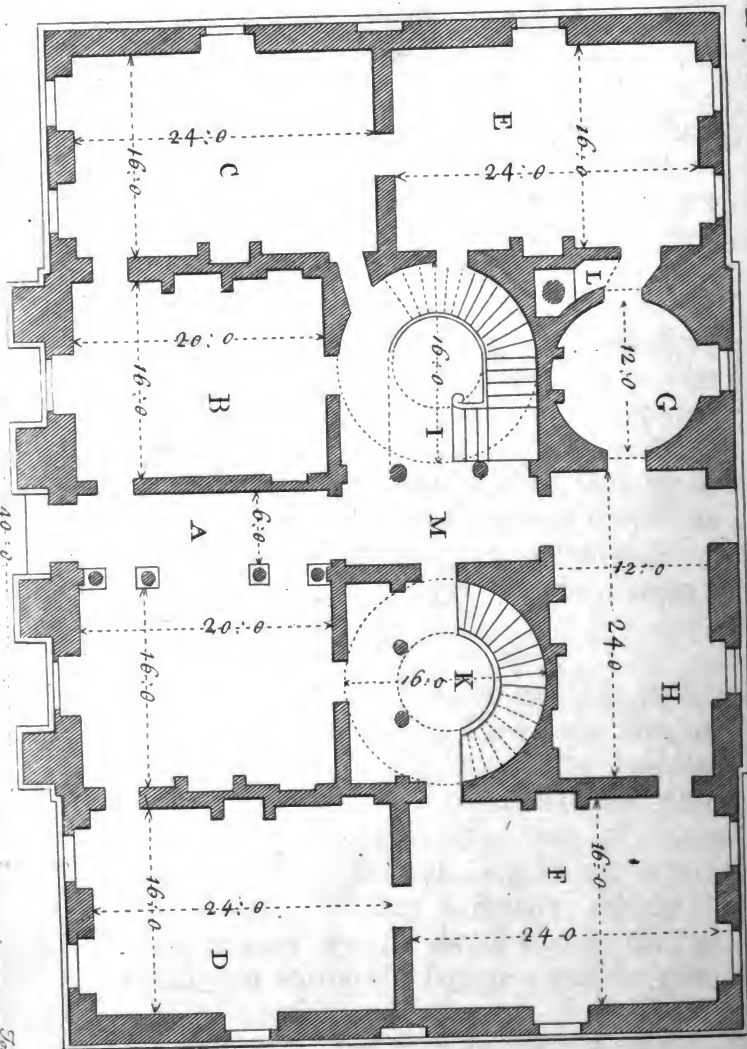
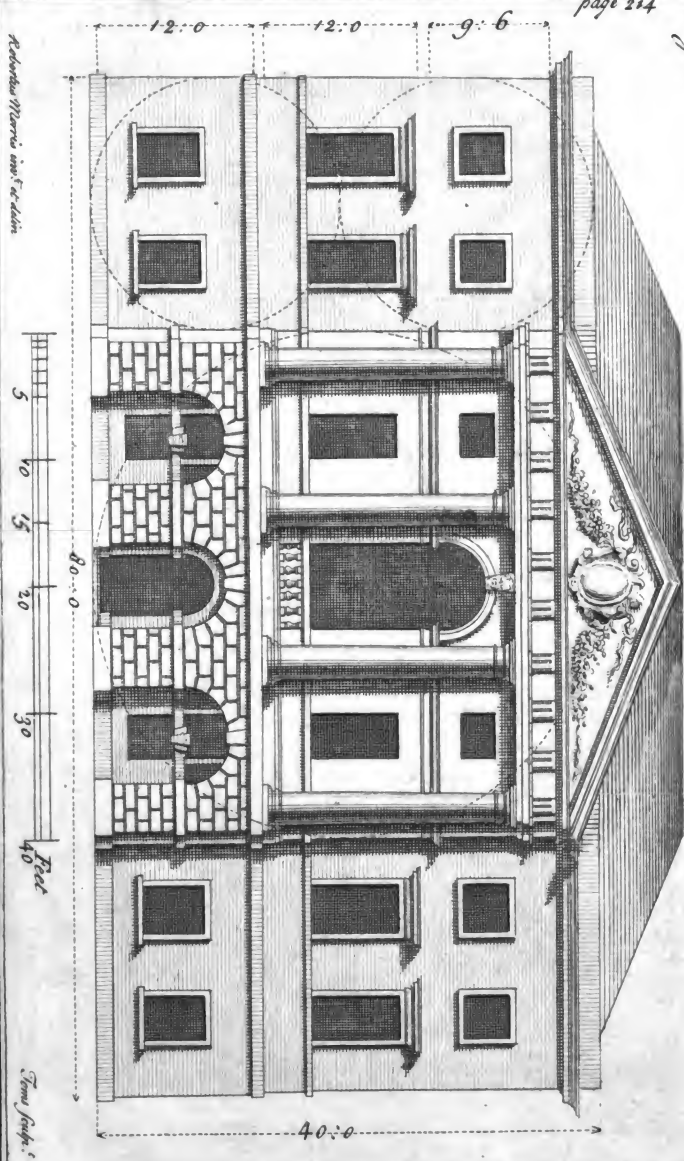


Fig. I.

page 214

Proport 6.4.8.3.





# ARCHITECTURE. 215

wife explain'd by the two inscribed  
*Circles* on the Profile ; the rest of the  
 Parts may be more particularly exam-  
 in'd by the Scale thereto annexed.  
 The Spot for Situation I propose —

*By Severn, Trent, or Thames's ouzy Side ,  
 Where gliding Floods in circling Eddies play  
 Thro' flow'ry Meads, whose verdant Banks  
 enfold*

*The Silver Surface of the limpid Stream ;  
 The Artist THERE the firm Foundation lays,  
 Graces and decorates the proper Parts,  
 And nicely garnisheth the opening Voids :  
 The Rustick Center riseth to support.  
 The gayer Beauties of the Dorian Mode.*

*To mingle ART with NATURE's solemn  
 Form,  
 Not far remote a steepy Rock should rise,  
 Plac'd in the Center of a large Canal.  
 Around its Base and craggy Sides should grow,  
 In wild Disorder, various Ever-greens ;  
 Blended with these, bespangled Shells should shine,  
 Reflecting RAYS to cheer the weaken'd Eye,  
 By Beams alternate from the fluid Wave.*

*By nicer Art, upon the Summit's Top,  
 A little Rustick, well-proportion'd Pile,*

Y

BY

## 216 LECTURES ON

*By painful Steps the Curious should ascend ;  
Th' Approach less steep, less craggy than the  
rest.*

*Here, open to the Stream on ev'ry Side,  
An Engine's Force should raise the flowing  
Wave,*

*And round the Pile in thousand Caverns play ;  
By secret Pipes, diffus'd from Shell to Shell,  
A RESERVOIR collects them as they fall :*

*Thence, in one Torrent, CATARACTS descend  
With rapid Force, rebounding as they run  
From Cliff to Cliff, to the disorder'd Stream ;  
From thence—in bubbling Murmurs die away.*

BESIDES these Embellishments of *Art* to *Situation*, *Nature* might find many Beauties to *grace* the Spot ; some distant *Hills*, or *Woods* on rising Grounds, or else a more open Prospect to the contiguous Country. As Seats thus situate have the Advantage of being easily supplied with *Provision*, and rendered less Expensive by the Reasonableness of their Conveyance, with generally a clear temperate Air, provided the Building be a little from the *River*, and on a rising Ground ; this, by a large Amphitheatre, and easy *Slopes* of continued Verdure to the Edge of the River, would  
make

make it extremely pleasant for a Summer Retreat; for which purpose I would choose to have it as far from a *Town* as I could conveniently, or at least from a *populous* one. Here might be enjoy'd all those Pleasures that *rural Retreats* can afford to the pensive studious Mind; and few others can be said truly to possess that inward Happiness and Tranquillity.

THE Plan is of a Magnitude capacious for a middling Family's Residence, intending the *Offices* to lie on the back-part, and the common Entrance from thence to be at the Room marked H; the principal Entrance being design'd to be at the Garden Front, at the Room marked A. I have propos'd the Height of the Ground and Chamber-Stories each to be 12 ft. therefore, by dividing the Hall, or Entrance A, by a Screen of Columns, it is form'd into the Proportion of 5, 4, and 3, being 20 ft. long, 16 ft. broad, and 12 ft. high. The Room marked B is likewise the same Proportion. The Rooms marked C, D, E, F, are the Proportion 6, 4, and 3, the same as the external Part of the Building; the Length 24 feet, Breadth 16 feet, and Height 12 feet.

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THE Room marked G, is a Circle 12 feet Diameter, and its Height 12 feet. And the Room marked H is a double Cube, being 24 ft. long, 12 ft. wide, and 12 ft. high; through which from the back Front to the Passage M, leads to two Stair-cases which lie contiguous to each Apartment, and are 16 feet Diameter; they are separated below by a Screen of Columns to that mark'd I, and by a Wall to that mark'd K, which I propose for common Use. On the Chamber Floor the Plan is continued after the same manner, the Stairs being open to a Gallery as a Communication to the Apartments and Back-stairs; they may finish in an *Octagon*, or *Circle*, and be illuminated at the Top by an *octangular* or circular Sky-light; the Stairs being with an open Newel 7 ft. 6 Inches in the Clear, for the more advantageous Reception of Light.

THE Chamber-floor should be the *Principal*; and over the Rooms mark'd A, B, I propose to discontinue the Wall, and make one Room the Length of the Break, which is 40 ft. long; and by continuing it through the *Attick* Story, it will be 20 ft. high. The Wall between

tween that and the Stair-cases is to go through the *Attick* Story ; so that Room will be, as below, 20 feet wide, which makes it a Double Cube, having no Room over it. In the *Attick* Story, over the Cross-walls of the four principal Rooms, might Alcoves be made to each Room for the placing Beds, and a Communication from the Stair-cases ; and if required, on the Side opposite the Entrance, a private Way might be made to all the other Apartments, without passing the Stair-cases, and they have a Passage each by a Door-way to the Stairs. On the Ground-floor a Situation like this might make the Place mark'd L, always free from being offensive to the House, if converted to a Water-closet by *Vents*, &c. convey'd in the Spandrils of the Stair-case.

THE Building I propose all of Stone ; at least, all the *Rusticks*, *Columns*, *Entablature*, Strings, Drefs, and other Ornaments, and the Parts to consist of few Members, the fewer are less liable to Injuries, which Casualty or Time may produce ; the more plain and simple they are, best suit the *Dorick Order* : There is something *grave* and *solemn* in this Order, with a *majestick masculine*



## 220 LECTURES on

Aspect, that renders it pleasing and awful. I have chose to omit Dress to the middle Part, to give the Columns a bolder RELIEVO, and to preserve that Assemblage of *Dress* and *Proportion* which grace the Design.

I HAVE NOW by EXAMPLES shewn, that PROPORTION is absolutely necessary in the performance of every Design, and Beauty is founded on it, and both are dependent upon the unerring Laws of Nature. *Dress* and *Decoration* are the next *Essentials* to HARMONY, and they are dependent upon *Situation*, and the joint *Union* and Concordance of the WHOLE assembled together *artfully*, is the Care of the judicious ARCHITECT: His proper Choice and just *Composure* makes every Design pleasing to the Eye; and if the *Energy* of *Description*, join'd with those little Buildings in *Miniature*, are capable of giving you a just Idea of what Importance this Law of Nature, PROPORTION, is of, to grace and beautify the different Scenes of Situation, I imagine I have NOBLY aim'd: There the utmost of my Wishes extend, to do something, that may not only be thought worthy notice, but *likewise* endeavouring to render those few and SECRET RULES,

## ARCHITECTURE. 221

RULES, which were the Care of the Ancients to preserve, even now practicable, and worthy Imitation.

FROM this manner of Designing flow all the Beauties of *Architecture*. The *Modus* may be shifted, extended, varied, decorated, disposed, and *methodically* ranged into any *Form*. These Proportions may be embellish'd, garnish'd, and beautified with Enrichments to *Profuseness*, or more discreetly transposed by Rules, just as the Taste and Genius of the Architect is directed ; all arising from that one unerring Rule PROPORTION. The fine *Features*, the well-turn'd Arm alone, did not compose the fine VENUS; it was the joint Concurrence of the separate Parts, whose just PROPORTIONS finish'd the *inimitable* Piece. —

PROPORTION! when I name that pleasing  
Word,

*In silent contemplative Rapture's lost,  
All NATURE seems to start, and say, 'Tis here.  
The humblest Shrub our Admiration craves,  
Its Form and Growth proportion'd to its Strength.  
Th'aspiring CEDAR, or the sturdy OAK,  
By just Proportions rising in their Growth,  
Held by proportion'd Fibres in the Earth,  
To bind, sustain, and nourish as they shoot.*

*The*

*The crawling Ant's proportion'd to its Use ;  
 The Legs and Parts are fitted to sustain,  
 Direct, and guide it, when it seeks for Food,  
 And Power proportion'd to convey it home.  
 The Dog, the Horse, the Elephant, have all  
 Their Parts proportion'd, each to proper Use :  
 The finny Element, the feather'd Brood,  
 In thousand diff'rent Forms and Shapes appear  
 PROPORTION'D, as their diff'rent Magnitudes  
 For Use, or diff'rent Nutriment, as each  
 Provide, receive, or well digest their Food.*

*Last made in the Creation, finish'd Piece !  
 That just proportion'd, NOBLE Being, MAN !  
 How apt each Part is fitted to its End,  
 All nicely serving each to proper Use,  
 In beauteous Form, and in PROPORTION just !*

*Mark how the Orbits, equal pois'd above,  
 In just PROPORTION started at a Word,  
 Keep still their Course in their allotted Sphere,  
 Nor fly diverging from their proper Orbs,  
 But swiftly move in their amazing Paths,  
 By Powers attractive or expulsive held,  
 Self-balanc'd by PROPORTION'D Magnitudes,  
 (TREMENDOUS THOUGHT ! ) their long eter-  
 nal Round.*

*The*

*The ancient Grecian DEITIES derive  
From human Passions all their boasted Fame.  
From Strength (Vain Power!) that Hero  
MARS was nam'd;  
And Beauty, Venus's Deity proclaim'd;  
Yet Strength and Beauty fade and die away,  
While JUST PROPORTION never can decay.  
THIS greater Power will endless Ages run,  
For ever blooming, and for ever young.*

GENTLEMEN, As the Subject of these *Lectures* have been a *Description* and *Recommendation* of *Rules* to be applied to the Practice of Architecture, and that all *Rules* are founded on *natural* and *harmonick* Principles, PROPORTION has been that *one* necessary Branch on which those Rules are established; and what I have said already on that Head, as an Inducement to your acceptance for practise, is sufficient.

SITUATION, however *fictionitious* or *romantick* I may have described it, falls immediately among the *first Class* of the *innocent* and *felicitous* Enjoyments of human Life: What a vast Insight is it capable of giving to a speculative Mind, in the *Contrivance* and *Wisdom*  
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of PROVIDENCE! What innumerable Subjects for Meditation, are different Scenes capable of furnishing the Imagination with! *Compassion* and *Humanity* are rais'd by the Calmness and Tranquillity of the Spot; and the more turbulent Passions of the Soul, which the Rigours of the *Elements excite*, are softned into a Serenity inexpressible.

ARCHITECTURE is that *great extensive* Art that is capable of furnishing the Mind with a multitude of pleasing *Themes*: It is not confin'd in a narrow Orb, nor limited to one spot of the Earth; the *frigid* or *torrid Zone* may have the same *general Rules* appropriated to each; the Glebe in the greatest *Profusion* and *Luxuriance*, in its full *Verdure* and *Fragrancy*, has set Limits to the Fancy of the Architect, as well as the most wild and irregular; the wanton Streams, which form themselves into a thousand little Meanders, have the same Proportions to direct the *Architect* in his choice of Design, as the *disorder'd* Borders of the Ocean, or near the *Rocks* and *Precipices* of hideous unpassable Cliffs.

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THE few who have treated on this Subject have wholly conceal'd this Branch of the *Art*, *Situation*, how to apply, decorate, or proportion the Design; their Aim has been more to perplex the Understanding of the Reader with difficult and intricate Rules for the far less important parts of Architecture, by different *Divisions* of Parts and *Members* of no Signification in the *grand Branch* of that Art, DESIGNING; so that the great and valuable Parts of it are neglected to be search'd into, and by such *Intricacies* they meet with in the Entrance, are hinder'd in the further pursuit of their Studies.

I HAVE NOW gone through such Remarks and Observations as I thought might be useful in the Course of these *Lectures*, omitting nothing which might be conducive to the Instruction of others, as well as the *Revival* of an *Art*, the Name only much the present Esteem of the Age. I shall therefore conclude with an Observation I have met with to this Purpose. The Author tells you, "the  
 " *Egyptians* in their *Hieroglyphicks*, ex-  
 " press'd a Man that confin'd his Know-  
 " ledge or Discoveries altogether with-

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“ in himself, by the Figure of a *Dark-*  
“ *Lanthorn* enclosed round, which, tho’  
“ *illuminated* within, afforded no Ad-  
“ vantage of *Light* to those about it.”  
For my part, as I shall communicate to  
the *Publick* whatever Discoveries I may  
*hereafter* further happen to make, I  
should much rather be compar’d to an  
ordinary *Lamp*, that *wastes* and *consumes*  
itself for every Passenger’s Use. I remain  
in the mean time, with due Respect,

GENTLEMEN,

*Your humble Servant, &c.*

*Read to the Society*

Jan. 13. 1734,5.

F I N I S.











